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[Continued from Vol. V, p. 468.]

TENTH CHAPTER*.

Be it known that the science of navigation is founded on reason and experience; every thing which agrees with both is certain; if you ask which certitude is greater, that of reason or that of experience, we answer that this is sometimes the case with reason and sometimes with experience; the *dair*^a that is to say the courses^b and monsoons are more known by experience; but the knowledge of the celestial signs, the arithmetic rules, the *ighzúr*^a, and *irqúq*^a, that is to say, the knowledge whether you must keep the sea or steer towards the land, and what belongs to it, is all dependent on reasoning; again the measures and distances are all founded on experience and on reason conjointly; but the calculated courses^b, or rather the regulated tracks^b

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behavoured as before to meet the illustrious translator's object
in the continuation of this curious work, by tracing out the
and affording such other illustrations as our position in India
of the last edition of HORNBOUGH containing the latest labors
of marine surveyors, for which we are indebted to Mr. GREENLAW,
such use. Most of the Native names on the coasts of Arabia, &c.
are fully noted by the Bombay officers.—Es.

~~William J. Jackson, Publisher~~

are taken from the usual voyages of the ports, that is, to say, the results of calculations and distances are the foundations⁷; if the foundations be certain the results are also certain, and if the foundations are false the results be the same. Be it known to you that you must get the knowledge of each place from its inhabitants, which is more certain than the knowledge acquired from strangers, but if the last be men of experience and seafaring people, consult and consider also their information; if the knowledge of the inhabitants be small, and that of the others is well ascertained, the latter is of course more to be relied on.

Of accidents to be taken care of, and of hurricanes.*

The masters of the Indian seas count ten things to be guarded against⁹.

1. Be on your guard against seeing *Socotora* at the end of the monsoon, because in that is much fear¹⁰.

2. Be on your guard against seeing *Ghubbei' benna*¹¹* on the 130th day of the Yazdajirdian year, answering to the 360 of the Julálían, (6th March)†; be also on your guard against seeing *Ghubbei Hálole*¹² which is on the south side of *Háfu*¹³‡.

3. Against seeing *Fartak*¹⁴§ on the 130th day of the Yazdajird. year = 360 Julál. (6th March) if you sail for Yamen; because in some places the Indian flood is very strong, particularly with a northerly wind. Be it known to you that on the 110th day of the Yazdj. year = 340 Jul. (14th Feb.) *Fartak* remains on the north.

4. From the 10th of the Yazdj. year (7th Nov.) up to the 80th (15th Jan.) that is to say, from the 240, to the 310 Jul. not to fall

غبة بئنه¹¹ زیادہ خوف در¹⁰ محزورات⁹ طوفان⁸ امہات⁷
فرتک¹⁴ حافو¹³ غبة ہالولہ¹²

* Quere *Ghabbai-tin* of the 21st voyage from *Diu* to *Maskát*: see vol. V. p. 462, supposed to be near Cape Isolette; *Ghabba* may mean a round or hollow place as a *gulf* or *cove*; *Kubha* or *Gubbha* of the *Páli* or *Sindhu*?—Ed.

† We have added the English dates adapted to the author's period (1553) making the Yazdajirdian year commence on the 28th Oct. and the Julálían on the 11th March. To adapt the observations to the present date, 10 days more should be added.—Ed.

‡ *Ras Hafoon* or *Cape Orfric* of *HORSBURGH*, on the *African* coast, lat. 10° 22', long. 51° 16' south of *Guardafui*; "between *Ras Mabber* and this cape lies a deep circular rock-bound bay (doubtless the one here pointed out as *Halula*) in which some of the Egyptian expedition were lost.—*India Directory*, I. 258.—Ed.

§ *Cape Fartash* of the maps, N. E. of *Kisseeen* on the south coast of Arabia. One Arabian whom we consulted, doubted whether the meaning was not rather that the hatches, (in Hindi *phatta* or *phatak* or gate) should be closely shut as the sea ran very high at that season.—Ed.

towards the south, particularly with great ships and if you are sailing for *Maskát* and *Hormúz*.

5. If on the days on which the wind is blowing at *kawas*^{15*} the cape *Yabas*¹⁶ and cape *Sárek*¹⁷ are at hand†, guard against passing to the Arabic coast because it is impossible to make after it any other land but the coast of *Mekrán*.

6. If you wish to reach *Malacca* guard against seeing *Jámas feleh*¹⁸ because the mountains *Jebál Lámeri*^{19‡} advance into the sea, and the flood is there very strong.

7. Be on your guard against seeing on the 90th (25th Jan.) or 200th (15th May) day of the Yazd. 55 or 65 Jul. year from *Gujerát*, *Furmiún*²⁰ and its districts exist *Somenút* and *Gúlinár*^{21§}; in seeing the last there is no harm.

8. Be on your guard against being neglectful during the course in the sea of *Kolzum*||, that is to say, in the Arabic gulph, which is that of *Hejáz* and *Jedda*, because the two shores are very near.

9. Be on your guard against neglect in vicinity of the shore; generally you must be on your guard against seeing coasts of any description.

10. Take care to muster on each voyage all your instruments and stores, be it masts, rudders, yards: if the wind be strong shorten your sails, particularly at night, if the sky be clouded, windy, rainy; be on your guard against incurring damage.

Besides these ten *Mahzúrát*²², that is, things to be guarded against or to be taken care of, there are also some others which seafaring people must pay attention to. First the circle of the constellation ²³*Nejam ez-zaujíl*, which the Indians call, the constellation of the *Jogni*, and which by the astronomers of *India*, *China*, *Turkistán* and *Kiptshak* is

جامس فله ¹⁸ راس سارق ¹⁷ راس ييس ¹⁶ كوس ¹⁵
نجم الزوجي ²³ محزورات ²² كواي نار ²¹ فورميان ²⁰ جبال لامري ¹⁹

* By *kawas* or *kaus*, is generally understood south, perhaps the south-west monsoon.—Ed.

† *Rasul yabas* is one of the projecting headlands south of *Rás ul had*, whence the monsoon would easily take a vessel across to the *Mukrán* coast. It is called *Jibsh* in HORSBURGH (I. 314). *Rasul Sárek* is perhaps another of the promontories here—the nearest in name is *Ras ul Sair* farther down the coast near *Djobar*.

‡ *Jámas, feleh* must be the *Pulo Anzas* or *Mudancoos* of HORSBURGH, two islands lying on the verge of a shoal dangerous of approach on the *Malacca* coast, where *Pulo Loomant* (the *Lameri* of our author) stretches out beneath *Parcelar* hill. The set of the flood tide here is particularly noticed by the Indian marine surveyors.—*Directory*, II. 226.

§ *Meelánee*, *Somnáth* and *Koureenar* (or *Girnar* ?) of the maps.

|| *Kulzum* signifies the great ocean, but it is applied here to the Red Sea.

called that of the eight stars. They fancy it to be like a drunken camel which is roaming every day in a different direction. For example, on the 1, 11, and 21 of the Turkish month it appears in the east; on the 2, 12, and 22 between east and south in the point of compass which the Turkish mariners call *Kashishlama*²⁴ (S. E.); on the 3, 13, 23, it is seen on the south; on the 4, 14, 24, on the point *Lados*²⁵ S. W.; on the 5, 15, 25, it is seen on the west; on the 6, 16, 26 between west and north, on the point of compass called *Karayal*²⁶ N. W.; on the 7, 17, 27, it is seen on the north; on the 8, 18, 28 between north and east on the point of the compass called *Boreas*²⁷ N. E.; on the 9, 19, 29 it is underneath the earth; on the 10, 20, 30, above it. It should be remembered that the beginning of the Turkish month is not from the sight of the crescent, but from the meeting of sun and moon (or true conjunction) which happens sometimes one and sometimes two days before the first of the Arabic month (the beginning of which is calculated from the sight of the new moon): if you know this take care not to undertake a voyage on that very same day of the conjunction of sun and moon; the masters of the Indian seas are particularly careful about it.

Of the circle of the men of the mystic world^{28*}.

SHEKH MOHIYUDDIN UL-ARABI' has fixed the places in which the men of the mystic world are to be found on each day of the month;

رجال غائب²⁸ بورياس²⁷ قرطيل²⁶ لدريس²⁵ كششلامه²⁴

* It might be supposed that the two separate superstitions described by SIDI ALI were merely different versions of the same story; for the Indian *yogini* योगिनी, or wandering fairy which he states to be the same as the *najm u'zojil* or circle of the constellations, is by all other authors identified with the *rijal ul ghaeb* or invisible beings. The positions of the *yogini* however correspond only with the latter; and I am assured by a Persian friend that the Turkish 'starry circle,' called also *sakés yaldaz* is quite distinct from the other: he points it out in the constellation of Cassiopeia, to one of the stars of which he gives the name of *nágeh* or camel. (See Obs. on Arabic Compass, vol. V. p. 792.)

This constellation being situated as near the pole as Ursa major will be seen, in northern latitudes, like the latter performing a complete circuit round the pole; whence probably has arisen the fable of both their wanderings, but though the circuit will be repeated in 24 hours nearly, it can have no reference whatever to the moon's revolutions.

In Dr. HERKLOT'S *Qanoon-e-Islám*, page 395, will be found a full explanation with diagrams of the mode of finding the lucky and unlucky aspects as practised by the Musalmáns, who merely regard the *day* of the new moon, not the exact time of conjunction, and have further adopted a fixed scale of positions for the days of the week. But to exhibit the orthodox version

viz. on the 7, 14, 22, 29, they are in the east; on the 4, 12, 19, 27, in the west; on the 3, 15, 23, 30, they dwell in the north; on the 8, 11, 18, 25, they stay to the south; on the 6, 21, 28, between north and east (N. E.); on the 4, 5, 13, 20, between north and west (N. W.); on the 2, 10, 17, 25, between south and west (S. W.); on the 7, 16, 24, between south and east (S. E.) This being known you must not steer in that direction, and if you engage at sea for battle you must be backed by the men of the mystic world; take care not to fight in a direction against them: and perform, with the face turned towards them, the following prayer:

" Greeting to you, O men of the mystic world; O holy spirits; O ye selected ones¹; O ye liberal ones²; O ye vigilant ones³; O ye wanton ones⁴; O ye pale ones⁵; O ye insurers⁶; O you pole⁷; O ye singular ones⁸; O ye guardians⁹; O you who are the best of God's creatures, aid

امنا افراد قطب امان اوتاد بد رقا نجبا نقبا

according to the Hindus I have extracted, from an astronomical work called the *samaya-pradīpa samaya-pradīpa*, by HARIHAR A'CHA'RYA, the following account of the stations occupied by the *yoginī* at different times.

पूर्वे चन्द्र नवाङ्किते उतवचे रामः स्मरारिर्धर्मो पञ्चम्या सहित सप्तो दशतिथि
नक्षत्रके द्वादशी वेदस्यापि जलाधिपे भुवनवट् वायौतथा पूर्वमा पष्ट्याष्टाच
षणाधिपे ऽसि दशमी दर्शष्टकौशङ्करे ॥

योगिनो वामतः पश्चात् गच्छतः शुभकारिणी ।

दक्षिणे पुरतोवापिनशुभेति विदुर्बुधाः ॥

¹ ⁹ ³ ¹¹ ⁵ ¹³
Purvā chandra navāṅkīte hutavahe rāma : smarārīr yamē pañchamyā sahitastra
¹² ⁴ ¹⁴ ⁶
yodasatīthir nairrītyakē dvādaśī vedasyāpi jalādhipi bhuwana śaṭ vāyau tathā
¹⁵ ⁷ ² ¹⁰ ³⁰ ⁸
purnimā śaśthīyākhyā cha dhanādhipē akṣhi dasamī darsāśṭakausankarē.

Yoginī vāmatāk paschāt gachchhatah subhakarīnī,

Dakṣiṇē puratovāpi nasubhēti vidur budhā.

" (The *yoginī*) remains in the east on the 1st and 9th *tīthi* or lunar days (of each *pakṣa* or semilunation) : in the south-east (*agni*) on the 3rd and 11th : in the south (*yama*) on the 5th and 13th ; in the south-west (*alakṣī*) on the 4th and 12th : in the west (*jalādhipa*) on the 6th and 14th : in the north-west (*vāyu*) on the 7th and 15th : in the north (*kuvera*) the 2nd and 10th : and in the north-east (*Isāna*) on the 8th and 30th *tīthi*s.

" Whoever goes on a journey does well to keep the *yoginī* on his left or behind him. To place it in the south or in front when going, is accounted unlucky by the pandits."

HUNTER'S Hindustāni dictionary informs us in addition to the above, that his (or her) influence is exercised especially during the 9 *gharis*, (or 3 hours 36 minutes) at the close of each *tīthi* or lunar day, which latter is reckoned not like the civil day but as a thirtieth part of the actual lunation, so as to make it a

me by your aid ; pity me by your pity ; help me with your help ; look on me with your look ; obtain for me my wishes and purposes ; provide for my wants : facilitate my petitions with God in truth, and with man in appearance, by the grace of the lord of apostles, and the favour of the pious Mohammed on whom be peace in this world and in the next." Some say that this prayer is to be repeated 366 times.

Besides this you must take care not to navigate on the unfortunate days of the year which are the 12 of *Moharrem*, 10 of *Safer*, 4 of *Rabi-ul-awal*, 28 of *Rabi-us-sáni*, 26 of *Jamázi-ul-awal*, 12 of *Jamázi-sáni*, 12 of *Rajjab*, 26 of *Shaabán*, 24 of *Ramadhán*, 8 of *Shawwál*, 18 of *Zilkaada*, 8 of *Zilhija*, and the last Wednesday of the year, called the sharp Wednesday*.

Take also particular care not to navigate when the moon is in the *Scorpion*, and in the burnt days¹⁰, that is to say, when the moon is in the constellation of *Libra* from the 19th degree of it till to the fourth of *Scorpion* ; but if the moon be actually in the constellation of *Scorpion* the evils attending it belong but to journeys on land ; and this time is, on the contrary, a blessed one for voyages at sea. This is written in the ephemerides of Arabic astronomers ; they have fixed for each of the seven planets a day and a night of the week ; for the sun, *Sunday* ; for the moon, *Monday* ; for Mars, *Tuesday* ; for Mercury, *Wednesday* ; for Jupiter, *Thursday* ; for Venus, *Friday* ; for Saturn, *Saturday*. As to the nights they are under the influence of planets as follows : the night

ایام محترقه¹⁰

work of some calculation to discover the precise position at any given period. The Hindus still put implicit faith in these astrological absurdities, and the Musalmáns still imitate them in commencing no great undertaking without previous determination of an auspicious moment.—ED.

The best account (however imperfect) hitherto given by European travellers of the *men* of the mystic world is in Mr. LANE's most excellent work on the manners and customs of the modern Egyptians.—H.

* The greatest possible latitude prevails as to these evil days, HERKLOT says on one authority, that there are 7 in each month, again on another, that there are two, but neither agreeing with these enumerated by SIDÍ. The *Ajáib ul Makhlukát* contains another list of fortunate days, giving all but unlucky Wednesday (which HERKLOTS however deems lucky) credit for some good quality—Friday, for cutting nails ; Saturday, because any thing born on it will outlive a week ; Sunday, because creation commenced thereon ; Monday for journeys ; Tuesday, for bathing and shaving ;—Thursday for undertakings ;—but Wednesday, black Wednesday, is fit for nothing but taking medicine ! The last Wednesday of *Safar* called *ákhiri chárshamba* is esteemed the most unlucky of days in the year.

Of the months, according to the same authority the following months only are unlucky, *Safar* and *Rabi-us-sáni*, all the rest are fortunate, *Rajab* and *Ramzán* being particularly so.—ED.

of Sunday belongs to *Mercury*, that of Monday to *Jupiter*, that of Tuesday to *Venus*, that of Wednesday, to *Saturnus*, that of Thursday to *Sol*, that of Friday to *Luna*, that of Saturday to *Mars*. They have divided each day and night into twelve hours, and given to each of them a planet. To find the names of these you must take the final letters of them, and the initials of the days and hours beginning with Sunday, and with the night of Sunday.

For example, you add to the letter¹¹ (*surkh-dehal*) intended for the days ; those of (*dehal-surkh*) ¹²intended for the nights : that is to say, the first hour of Sunday belongs to *Sol*, the second to *Venus*, the third to *Mercury*, the fourth to *Luna*, the fifth to *Saturn*, the sixth to *Jupiter*, the seventh to *Mars*, the eighth to *Sol*, the ninth to *Venus*, the tenth to *Mercury*, the eleventh to *Luna*, the twelfth to *Saturnus*. The first hour of the night of Sunday belongs to *Mercury*, the second to *Luna*, the third to *Saturnus*, the fourth to *Jupiter*, the fifth to *Mars*, the sixth to *Sol*, the seventh to *Venus*, the eighth to *Mercury*, the ninth to *Luna*, the tenth to *Saturnus*, the eleventh to *Jupiter*, the twelfth to *Mars* ; the hours of the other days are to be made out in the same way. As soon as you know the planet of the hour, you know also in what hours you may put to sea, and in which not. By no means in the hour of *Saturnus* which is unfortunate, but by all means in that of *Jupiter*, which is fortunate ; not in those of *Mars* and *Sol* but in those of *Luna* and *Venus* and *Mercury*.

Some men of talent have comprised the rules of the days of the week, on which navigation is to be undertaken in the following Persian verses :

سوی مشرق دوشنبه نروی ای برادر من به
آنکه از مغرب آورد کینه روز یکشنبه است و آذینه
روز سه‌شنبه و چهار بقال نروی زنهار شمال
پنج‌شنبه چوسر بر آرد خور رفت خود جانب جنوب مبر

“ On *Saturday* and *Monday* not to sail,
O brother, to the East is sure the best.
Sunday and *Friday*, are the day which bring,
Resentful, many evils from the west.
On *Tuesday* and on *Wednesday*, to the north.
Don't go ; take care, it is of no avail ;
And on a *Thursday* when the sun is rising,
T'wards the south, I beg you'll never sail.”

It has been already mentioned that the tract of sky which is between the point of sunrise and north is called *East*, that between

¹¹ دیهل سرخ ¹² دیهل

the point of sunset and south is called *West*, that between the point of east and west is called *North*, and on the opposite side *South*. Consider all this when you undertake a voyage ; when, please God, he will make every thing easy to you and your voyage shall be attended with much profit.

Be it known to you that the most dangerous *Tufáns* or storms in India are five. The first begins in India on the 310th day of the Yazdajirdian year,—175th Jul. (1st Sept.) which is called the rein of the elephant. The second is that of *Ohaimer*¹³ on the shore of *Ahkáf* from the district of *Madaraka*¹⁴ reaching to *Sheher*¹⁵, and in some parts to *Aden* ; it sets in on the 315th day of the Yazd. = 215 Jul. year (6th Sept.) ; in some years earlier, in some years later.

The third is called that of the forty (*Erbaain*), in the sea of *Hormúz*, it begins on the 50th day of the Yazdajird. year = the 280 Julál. (15th Dec.)

The Fourth that of the girls (*Benát*), known by the name of *winterly wind*¹⁶ ; it sets in from the very place of the *Bindt-ul-nuash*¹⁷ (the three stars of *Ursa*), and extends nearly to Aden over the whole Arabian continent ; in some years it does not reach Aden : it begins on the 50th day of the Yazdj. year, (15th Dec.) and ends on the new year's day, that is to say, from the 280th to 330th day of the Julálian year, (5th Feb.)

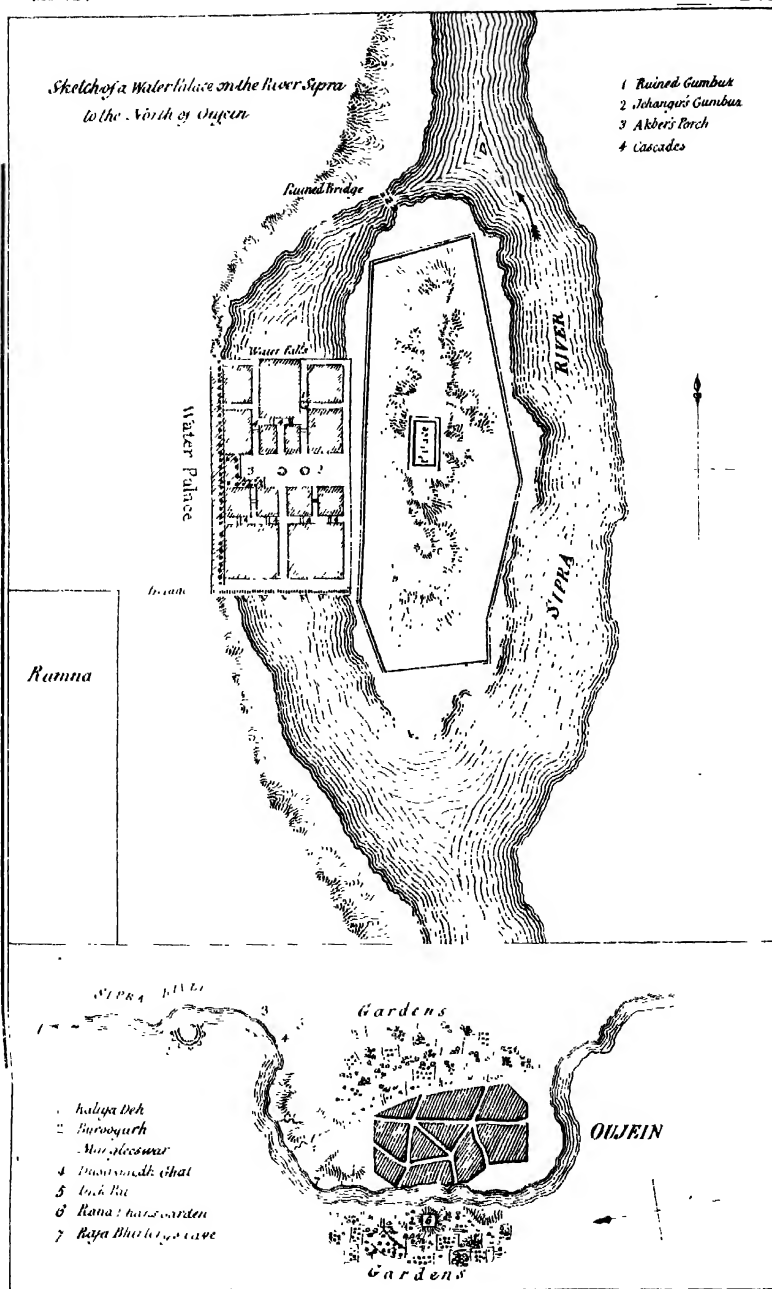
The fifth is that of the ninety (*Tisain*), in the Indian seas ; it sets some years earlier and some years later in ; this *Tufán* extends also to the continent of *Ahkáf* where it comes from *Barr mo*¹⁸, that is to say, from the shore, the people of *Mahr*¹⁹ call it *Shallit*²⁰, and the sea is under the wind ; it lasts till to the 190th day of the Yazdajirdian year = the 55th of the Julálian, (4th May :) this is the strongest of all, and extends, if powerful, over the whole world.

Finished, by the providence of God the omniscient, in the town of *Ahmedábád* the capital of *Gujurát*, in the last days of Moharram 962 (end of December 1554) of the Hejra. Written in the last days of *Rabi-ul-awal* 966, (end of December 1558), in the town of *Amid*.

برمل¹⁸ بنات العاش¹⁷ ریم مشقا¹⁶ شهر¹⁵ مدرکه¹⁴ اوحیمر¹³
شلی²⁰ مەر¹⁹

* *Ras Madraka* is, I find by HORSBURGH, Cape Isolette, which I before supposed to be *Ghaibba-i-tin* : the latter may be the rocky bay near it.—ED.

† *Mahrastra* and *Chola* of the west coast, or more probably *Marawa* and *Chola* which with *Karnata* were the most influential states of the peninsula until the 16th century, when they succumbed to the *Vijyanagar* princes.—ED.



II.—*Observations upon the past and present condition of Oujein or Ujjayani.* By Lieutenant EDWARD CONOLLY, 6th Light Cavalry.

Having lately had an opportunity of paying a visit to this ancient city, where I endeavoured, as far as a few days would allow, to explore the various buildings and temples within its precincts, collecting specimens, papers, antique coins, and inquiring into points of history and superstition, it has occurred to me that I may be able to add something to the hitherto meagre and faulty descriptions published of this celebrated place.

European visitors to *Oujein* generally first hasten to the water-palace. In my survey of the town and its environs therefore this will be a convenient spot from which to begin my observations*.

Five miles north of the city, the *Sipra* running due north separates into two channels, and surrounds an oval-shaped rocky eminence of about five or six hundred yards in circumference. The island thus formed, which a now dilapidated wall encloses, is crowned with a clumsy, rudely fashioned palace, the architect of which preferred solidity to elegance; for the rough blocks of trap composing the walls have no carving or ornament save where some isolated stone shews, by its sculptured figures, that it once adorned a more ancient edifice†.

Two solid bridges, at either extremity of the island connect it with the left bank of the river. The one to the north where the bed of the stream is more narrow and the rush of the water more violent, has with the exception of one or two tottering arches been swept away. The other seems to defy time and the elements. From this last the water works commence. The floor of every arch has been faced with masonry and a narrow canal, cut into the centre of each, alone affords a passage for the water in the dry weather. The bed of the left stream (its whole breadth) for more than a hundred yards to the north of the bridge, has been similarly levelled and chunamed. The water, stealing gently through narrow and sometimes fancifully shaped conduits, feeds in its course numerous square tanks, shivers over carved *purdahs* a yard high, and at length united in a larger reservoir, tum-

* HUNTER notices this place, *As. Res.* vol. VI. FORBES devotes a few lines to it. Sir W. MALET published a paper upon *Kaliya dek* in the *Oriental Repository*, a work I have not been able to procure.

† For the palace see HUNTER;—a few of the doorways and cornices are however faced with less common material. I noticed a reddish-brown porphyry, (Spec. 1.) a yellowish-brown porphyritic sandstone, (Spec. 2.) a spotted do. (Spec. 3.), and a handsome red stone, old red sandstone, (Spec. 4.), all these I was told are from *Rampoora*. (The numbers refer to specimens forwarded.)

bles with a fall of perhaps 20 feet, over a perpendicular wall of masonry, into its natural bed. Pucka walks separate the tanks from each other, and in the centre, one broader than the rest cuts across from bank to bank, dividing as it were the works into two squares. The right bank (of the left stream) by a singular neglect and want of taste presents only its natural rude face of black and broken earth, whereas it afforded, by its gentle slope up to the palace, an excellent base for a terraced ghât.—The left bank has been more favored, an arcade lines it which opens to the river, and whose flat and pucka roof is on a level with the top of the bank. The domed chamber contained between each arch occupies about fourteen square feet. From the central chambers a second arched way projects, giving this part of the building a double width*. Two tanks occupy the outer, and spread a delightful coolness through the interior, apartment. At a little distance from the left bank four high stone walls enclose a space whose circuit is about three miles. It was probably once a *rumna* or garden.

All these buildings are of trap, the material of most of the temples and walls of *Oujein*, and which is quarried in a range of hills three miles W. N. W. of the city. The assertion of HUNTER that this range is granite must have been a slip of the pen, for the step-like sides and tabular top betray its composition from a distance, and granite is quite unknown to *Oujein*. The range also extends only two and not seven miles as HUNTER writes†, which seems to indicate some indistinctness in the MSS. at this place. The stone quarried here, and generally for building throughout South *Malwa* differs in no respect from the common trap of the *Vindhya*, except that being less interseamed with quartz it affords a convenient material for the chisel. The hills from which it is extracted do not furnish that variety of geodes, zeolites and calcareous minerals which are spread in such profusion over the ranges near *Mhow*, and the only amygdaloid I could detect on the *Oujein* hill seemed merely decomposed trap, its cells lined with green earth but containing no crystals‡.

To return to the water-palace. The works above described are so solid, and the chunam so excellent, that the water which annually

* See the plan. The two sketches 1 and 2 which accompany this paper have no pretensions to minute accuracy. They are in some degree drawn from recollection and are merely explanatory of the text.—I am indebted for them to the kindness of Lieutenant KEWNEY, D. A. S. M. G.

† A similar range lies to the south not far distant, but with a different elevation.

‡ The sun was however so hot, and I was so unwell that I could not stay to dig.

covers them has committed but little injury, and the edges of the greater part of the *kunds* and canals are unbroken and even sharp. Two or three of the north chambers of the arcade cannot indeed be entered, the deposit of the river having choked them up, and *kahi* (of which I know not the classical name) disfigures a few of the tanks, but a trifling expenditure of time and money would restore its original beauty to the place. Indeed the water-palace may perhaps be said to have received more injury from friends than enemies, from innovation than neglect, for as Sadi expresses it :

هرکه آمد عمارت نو ساخت رفت و منزل بدیگری پرداخت
وان دگر بخت همچنان هوسی وین عمارت بسربرد کسی

“ Every one who came erected a new fabric. He departed and evacuated the tenement for another, and this in like manner formed new schemes. But no one ever finished the building.”

More fully to explain my meaning, it will be necessary to premise that a very cursory view of the buildings detects them to have been the work of neither one architect nor one age. The palace on the island was evidently erected on the site and with the fragments of a Hindu temple, dedicated doubtless to some form of *Vishnu*. The debris of ruined fabrics are largely used in every stone wall near *Oujein*, but here the robbery has been more extensive, and many of the dislocated stones betray by the similarity of the patterns figured on them, that they were once united in a more honorable place.

Kaliya-deh, the serpent's haunt, seems a name borrowed from that of the kund in the Jumna at *Multra*, whose waters were poisoned by a serpent. It was thou “ Oh Krishna, who slewest the venom-breathing *Kaliya**.” In confirmation of this on a large and conspicuous slab stuck into the wall of the island I observed an excellently sculptured representation of Krishna blowing the flute, while eight petticoated gopis are playing on different instruments or dancing about him.

The practice of giving to favourite spots the names of celebrated foreign sacred places, is common at *Oujein* and elsewhere. By this simple process, the Hindu thinks to concentrate a quantity of holiness into a small space, and needy, feeble, or business-bound piety indulges in the plausible consolation of worshipping at home and at ease, the objects of a difficult or expensive pilgrimage.

The palace and wall of the island, the bridges and wall of the enclosure, I suspect to have been the first buildings erected here by *Musalmañs*; assigning a later date to the water-works : for the front

* Thus Jayadeva addresses Krishna.

wall of the palace and of the island, those which face the long side of the wall are parallel ; but these walls are not parallel to the banks which confine the water-works, so that the last when viewed from the palace have an unpleasing appearance of crookedness. One architect would hardly have thus distorted his work. It was so easy to have built all straight at first ; but it was not so easy to make the bank square to the palace already erected. The style too of the supposed earlier buildings seems to me more rude and in a different taste to that of the rest : but on this point I may be mistaken. The following inscription gives us the date of the first (according to my *theory*), Musalmán buildings, A. D. 1457.

Inscription outside the building, No. 1 of the sketch.—Date 1008 H. 1599 A. D.

بتاریخ سنه ۹۴۰ سال الهی موافق سنه ۱۰۰۸ که رایات ظفر آیات
عزم تسخیر دکن کرد باینجا عبور افتاد نامی زلفك دوش دلم
کرد سوال كز رفته و آینده بیان كن احوال * گفتا (چه خبر
ز رفتگان) نیست اثر آینده چورفته و آن چه میپرسی حال
راقمه محمد معصوم نیمی البکری *

We owe them therefore to the splendid MAHMUD KHILJÍ whose name is celebrated throughout *Malwa* for the multitude of his palaces. This will not interfere with the date 1499, ascribed to the water-works by Sir W. MALET†, and the last indeed might seem less in the taste of the martial MAHMUD than of his pleasure-loving grandson NÁSIR UD DÍN.

There is a silly tradition regarding the founder.

BADSHAH GHORÍ‡ possessed a talisman, the putting which between his teeth rendered him invisible. One hapless day it slipped down his throat. In a moment the wretched monarch felt a consuming flame devouring his entrails and—

While within the burning anguish flows,
His outward body glows,
Like molten ore—

* From this line is derived the date of the first builder, the value of the last word of the line is of course deducted from the sum total of the letters contained within brackets, 1563—701=862 of the Hegira, or A. D. 1457.

† MALET is said to have taken his date from a history of *Malwa*. It was not from FERISTEH's, for I have searched his huge folios in vain for any notice of *Oujein*. The *Mirat Iscanderi* a history of Guzerat informs us that the water-palace was built by NA'SIR UD DÍN.

‡ This Ghori would throw the date still further back, but a Hindu legend is but a frail base for a theory.

to quench his torment, he made the tanks of the water-palace, one or other of which he is always occupying, still invisible and ever on fire, and when his burning body has heated one pool, the miserable immortal seeks refuge in another. It would appear from ancient tradition that instead of the river flowing in two channels at *Kaliya-deh*, the bed of the present left stream was formerly occupied by a pool only. The *Bramha kund*, which is mentioned in the *Avanti-khand* and now converted into a square tank, forms in the eyes of the Hindu the principal attraction of the place. This was perhaps the well *Kalba-deh* spoken of by ABUL FAZL, "The water of which flows incessantly into a cistern which is continually running over and yet remains full."

The innovations complained of are of later date.

I have before mentioned that a broad central path bisects the works. Two tall carved purdahs stood originally on this path leaning like buttresses against the front of the outer arcade, one on the left, the other on the right. The water of two artificially supplied reservoirs sunk in the terrace above the arcade fell down these purdahs and fed two fountains in tanks one on each side of the path. The one to the left is the *Bramha kund**.

When the emperor AKBER was on his way to the *Deccan* in 1599, he substituted for the right purdah a new open archway, which stands out at right angles to the old arcade†. This (if it may be so called) portico is handsome, for the arches are well proportioned, and the whole is built of the red-stone, Spec. 4. Sed non erat hic locus—the new projection having nothing to balance it on the left looks unfinished and awkward. While the one purdah on the opposite side wears a similarly deserted appearance, and seems to complain of the absence of its fellow. The "wonderful buildings" two circular-domed *gumbaz* (domes) with arches opening outside, are agreeable summer-houses, but detract I suspect, from the simplicity of the original design of the works. They stand on the central path, and were the gift of JEHÁNOIR in 1620 as recorded in the subjoined inscription.

* There is no trace of the fountain of the right kund, but that there were originally two fountains the plan of the building and the two reservoirs above plainly indicate.

† It is on this portico that AKBER's two inscriptions are found. The second seems to have been written after the successes in the *Deccan*, but it is much defaced and the letters do not appear to contain a date.

Inscription in the building (No. 2 of the sketch), of the water-palace.

بحکم شاه جهان ساخت این دو تمبرگاه^۱ حسن بعهد جهانگیر شاه
اکبر شاه^۲ (بهشت روی زمین) یامت عقل تاریخش که سروران
جهانراست منزل دلخواه *

Another building of probably the same kind, and of which only the foundation remains, occupied a singularly awkward situation as the sketch will shew; and a more glaring fault, the left outer line of the central path is not parallel to the right one but slanting inwards, adds much to the already too distorted appearance of the square. It is difficult to account for the last deformity unless we suppose it the clumsy repairing of some modern bungler.

Notwithstanding these minor imperfections the water-palace is a delightful spot. The chief defect, absence of trees, could be easily remedied; for we have reason to believe, that formerly the neighbourhood was adorned with pleasure-houses, green fields, groves, and the wall enclosure doubtless marked the boundary of a garden*, but of the trees hardly a stump, of the buildings not a trace, remains, and *Kaliya-deh*, surrounded by barren ravines and uncultivated plains looks strangely bleak and deserted. Still few who have escaped from the heat of the day to the inner arcade, "so protected from the sun that it scarce ever sees it," while the running rivulets cool the air and the murmur of the water falling over the cascades lulls to sleep, will ungratefully call to mind the deficiencies of the place, or feel tempted to re-echo the sentiments of the surly poet, quanto præstantius esset

..... viridi si margine clauderet undas

Herba, nec ingenium violarant marmora tophum.

¹ This word was written on the stone حسن.

² The space between the brackets contains the date 1030, H. or A. D. 1620.

* The author of the *Seyr Mutuakhereen* describes *Kaliya-deh*, as consisting of a heart-delighting palace, and a well, ever full, and ever flowing, surrounded by pleasant buildings. He adds, that it was a country distinct from *Oujein*, and whose woods abounded in elephants; while its crops, fed the *Deccan* and *Guzerat*. This mélange of field and forest proves, that the author wrote *currente calamo*, without pausing to think. That there was formerly a large forest near *Oujein*, the traditions of *Mahakal ban* (hereafter noticed) seem to indicate but there is not now the remotest trace of it, nor was there probably any such when the country about the water-palace was well peopled and cultivated. I should be almost inclined to suspect that those who formerly described *Kaliya-deh* had never visited it, so unlike are their accounts from what we at present see. The author from whom I have first quoted is evidently a stranger to *Malwa* geography, for he speaks of *Dhar* as a city of the *Deccan*.

That book of lies, the *Jehángír nameh*, notices its author's visit to *Oujein*, but does not seem to allude to the water-palace.

The fresh-water lake is probably the *Sola Ságar* (presently mentioned) where many ruined Musalmán buildings, *idgáhs*, *masjids*, &c. still abound, and where the natives of the place believe *JEHÁNGÍR* to have, encamped—of the pavilion I could find no trace. When Sir T. ROE, accompanied the emperor to *Oujein*; they pitched at "*Calleada*." "This place was formerly a seat of the heathen kings of *Mandoa* one of whom was there drowned in his drink, who being once before fallen into the river and taken up by the hair of the head by a slave that dived, and come to himself, it was told him to procure a reward. He called for his deliverer and asking how he durst put his hands on his sovereign's head, he caused them to be cut off. Not long after sitting alone with his wife and drunk he had the same fortune to slip into the water, but so that she might easily have saved him which she did not, and being asked why, replied that she knew not whether he might not cut off her hands for a reward."

I do not find the name of *KALIYA-DEH* in the *Avanti-khand* of the *Shanā Purāna*.

A short kos south of the water-palace, the fort of *Bhairo*, a high wall with gates and towers encloses the left bank of the *Sipra* in the shape of a horse-shoe. The arch of the wall may be about a mile in circumference; a ditch formed by a mound of earth as an embankment, and like most native ditches without artificial scarping surrounds the fort, and a similar mound, higher then the wall, lines the interior of it for some distance. As you enter *Bhairo-garh* by the west gate, you find on the right a temple to the deity of the place. There is no end to *Bhairos* at *Oujein*, but eight only boast of superior antiquity. This is the principal, and bears the same name, (*Kala Bhairo*) as the well known form of the deity at *Benares*. As the *Kasi Bhairo* is lord of the rest, and has dominion over the jins and ghosts of *Benares*, so this image rules over his fellows at *Oujein*, and holds in subjection all the evil spirits of the neighbourhood. Different names distinguish the other seven *Bhairos** but all are imaged by a rude stone, with large mouth and eyes of red paint. The temple of the three-eyed god now before us, which was built by *MAHUDAJI*, or as he is familiarly called *MOHDOW SEINDIA*, is a mere bungala roof supported on a rude wall or by wooden pillars.

Leaving this the road cuts across a neat stone fort about 250 yards square which was left unfinished by its founder *MAHUDAJI*,

* *Vikrant*, the terrible. *Bálak*, the child. *Báruk*, the baby, &c.

and has never been completed. Passing on you reach the principal attraction of the place, the ghat of *Sidhnath*. The fish here seemed to me larger, more numerous, and more tame, than even at *Bindraban* or *Mandatta*. Many of the inhabitants of the city sending them a daily dinner, two or three of the larger fish may be always seen swimming slowly backwards and forwards before the steps, and when the servant arrives with his handkerchief full of flour and begins calling out *áo, áo*, stirring the stream with his hand, in a moment the place is in an uproar, and the water becomes so white with the fish that you cannot distinguish them as they jump and splash about in ecstasy. Heads of turtles too, peep out in every direction hastening to the banquet; these last are of enormous size, and so bold, that they drag their unwieldy shells up the slippery step snapping at every thing their small eyes can detect. I witnessed an amusing struggle between one monster, and a boy whose dhot he was tugging at, and with difficulty extracted my own walking stick from the jaws of another. On first reaching the ghát we were expressing our admiration of the size of the fish. Wait, said a bystander, till you have seen *Raghu*; the brahman called out his name in a peculiar tone of voice, but he would not hear. I threw in handful after handful of ottah with as little success, and was just leaving the ghát despairing, and doubting, when a loud plunge startled me. I thought somebody had jumped off the bastion of the ghat into the river, but was soon undeceived by the general shout of *Raghu, Raghu*, and by the fish large and small, darting away in every direction. *Raghu* made two or three more plunges, but was so quick in his motions that I was unable to seize his outline or to guess at his species. The natives bathe fearlessly here though they declare that alligators are often seen basking in numbers on the opposite bank. MAHADEO they believe, has drawn a line in the water, giving a command to the alligator, thus far "shalt thou come and no farther." I am sceptical as to the numbers not having seen *one*, though of course a stray brute may now and then appear, but the river confined between high banks runs before the ghát in a full deep stream, and alligators do not prefer deep, and shun troubled waters. Mermaids also frequent this favored spot*, and tales are told of them which would form an excellent supplement to PIRNY's marvellous chapter on the subject. But I have really so many wonders to intrude upon you that I must husband your patience.

* ABUL FAZL seems not to have doubted that mermaids flourished in *Malwa*, but he confines them to the romantic "stream of willows," the *Betma* (*Betwa*) river.

Siddh Náth presents a pleasant contrast to *Kaliya-deh* by the luxuriance of its surrounding groves : though itself unshaded it seems to have derived its name, for it was originally called *Siddh Náth*, from some sacred tree, "olim venerabile lignum," that once hung over it. The Jains claim a portion of the sanctity of the spot. One of their *Jattis* was sitting under an old leafless stump of a bur, when a gosáin ridiculed him for choosing such a shady situation : judge for yourself, said the jain. The other was no sooner seated, than he felt an agreeable coolness ; he looked up, the withered tree was groaning with foliage. This ghat is reputed a place of much antiquity, but of the old buildings nothing now remains, save a circular-domed open *mandir* whose ling has long ceased to be oiled. On the ancient ruins a temple and ghat of the modern white-washy fashion were erected about 13 years ago by some *Indore* merchant.

I was spelling through a staring, fresh-blackened, elaborate inscription cut in modern Hindí on the wall, when a facetious religieux saved me the trouble by informing me that it but recorded the vanity of some *Indore Baniáh* who built the place some 13 years ago, and stuck on it the year, month, day, hour, of its erection, with the names of his grandfathers, uncles, cousins, &c. The information was accompanied with a whine, a "da obolum," and "you have fed Mahádeo's fish, we are also his servants." A trifle rewarded his wit—in a moment the whole ghat was in an uproar, scrambling for a share of the mite.

The brahmans of large towns are proverbially avaricious and quarrelsome. Those of *Oujein* being perhaps worse than elsewhere are consequently held in little esteem. I gave a rupee to one of the attendants at *Bhairo's* temple ; hardly had we crossed the threshold before the usual wrangling commenced. Am not I so and so ? Am not I a brahman ? shouted one voice. You may be a brahman or any thing else was the retort, but we'll share the money for all that. Lamenting to a *Canouje* pandit at my side the degradation of his sect, he explained that nearly all the brahmans of *Malwa* are of the *Guzeráti* classes, which are looked down upon by those of *Hindustán*, and are notorious for their rapacity and avarice : he assured me, that in the larger temples, not one even of his own class could escape their extortions, for that they would not let a visitor quit the shrine, without his leaving what they chose to consider a donation proportioned to his means : but perhaps, added he, they are not so much in fault as the people amongst whom they dwell—*Jaisu dés taisa bés*. Pilgrims on arriving at *Oujein* hire guides to go with them the

rounds of the holy places. These cicerones (*Oudij brahmans**) sit at the gháts expecting their prey. They require from any brahman or respectable person whom they have escorted, a certificate to that effect in which they are very particular in inserting the name, family, habitation, &c. of the visitor. He who can shew the greatest and most respectable budget of these documents takes a sort of lead amongst his fellows ;—*hæc dignitas, hæ vires*. When a well dressed Hindu stranger approaches the gháts the guides press round him, “ take me I have read ” cries one, “ I have been here for 30 years and know every corner ” pleads another, while a third holds aloft a dirty piece of paper, and shouts in his ear, I escorted Shástri so and so, here’s his certificate. These pious men then push†, bawl and abuse, while the puzzled visitor alarmed at the hubbub, with difficulty extricates himself from their clutches, and must wonder in silence at this first specimen of the holiness of *Oujein*. A little to the south of *Siddh Nath*, the river as will be seen in the sketch, takes a turn to the right : in the bend and on the right bank is the ghát of *Mungaleswar*, a place of olden fame.

The present buildings, at which on every Tuesday there may be witnessed a crowded mela, a handsome solid ghát, a temple, and *Dharmśála*, are due to the piety of the excellent *AHALYA BAI*, to record whose liberality no pompous inscription will be found, though gratitude cherishes, with affection, the memory of her benefits.

Keeping to the right bank of the *Sipra*, and following a path which leads towards the city, you pass a rudely fashioned image of *Dharma Rája*, all besmeared with black paint, a call and ling at his side. Connected with and close to it, stands a small white-washed European-looking room, (unworthily dignified with the name of *Dharmśála*,) the walls and ceiling of which are polluted with the most indecent pictures that can be conceived. The indelicate figures that so often defile the tem-

* These are the more numerous, but poor brahmans of other *Guzeráti* classes are found, as the *Nagar*, *Audeembir*, &c. *Maharashtra* brahmans also may be met with : my guide was of this jāt, a very ignorant old man (I chose him for his wrinkles) who could do nothing but mutter mantras, and when asked a question kept his teeth closed and shook his head.

† As long as there is no gold or silver before them (says *LUCIAN* in the *Viskhrnou*, of some similar hypocrites) they are very good friends ; but shew them a single farthing and the peace is broken immediately ; there is no longer any order or agreement amongst them : they are just like the dogs ; throw but a bone, they all sally out, bite one another, and bark at him that carries it off—
FRANKLIN’S TRANSLATION.

ples of *Siva* are sometimes concealed in elegant sculpture or shrouded by the veil of time, and we are tempted in our love for the arts or the antique to be indulgent to the errors of an interesting superstition. But the daubs now before us can only have originated in the wantonness of a diseased imagination, and the disgust with which we view them is increased by their freshness, for the place which ought to be thrown down, was built only a short time ago by some miserable *bábú*. It is pleasing to turn from such a scene to a beautiful *ghát* a few paces further on, which together with a small but elegant temple of *Gungá* does credit to the taste of *RUKMA BAI* the widow of *MALCOLM*'s friend *TANTIA JOGH*. In the back ground groves and gardens enrich the scene: under the tall trees of the first, numerous tombs and *satti chabutras* add a pleasing solemnity to the scene. The produce of the latter feeds the goddess or her priest.

The *ghát* has been sacred for time untold. Its ancient name, *Das aswamedh*, might seem to imply that the ceremony of supremacy had been ten times performed here. Perhaps the *Das aswamedhas* were nothing more than the sacrifice of a horse at the termination or opening of some campaign; or we may suppose, and with greater probability, that the title was borrowed from some other quarter as *gháts* of this name are not unfrequent, as at *Allahabad*, *Bittour*, and if I mistake not *Gayá*. A little further on but away from the river *Ank-pát* appears, a place dear to the lovers of *KRISHNA*; for here the Indian *Apollo* and his brother *BALDEO* were taught their letters by *SANDI'PAN*, and exhausted in the short space of 64 days, the whole learning of the *Vedas*. The *kund* in which they washed their *taktas**, derives its name of *Dámodara* from a story told in the *Bhágawut*. *KRISHNA* thirsty one day from rambling about in that hottest of places, *Vrij*, requested a draught of milk from a *Gopi* who was churning. The good-natured girl left her work, and ran to fetch some, which she had placed to smoke on a fire hard by, but unhappily, it had all boiled over. The impatient and disappointed god overturned the curds. Enraged at such return for her civility, the *Gopi* seized hold of her rude guest, but in vain she tried to bind him; no string, however long, would encircle the mocking god, and when at length she thought him secured, *KRISHNA* ran away with his arms fast to his sides, and was thence called *Dámodara* or the waist-tied. Two temples† built on the brink of the *kund*, deserve notice for the excellence of their sculpturing. Figures of

* *Ank-pát*, ciphering—as taught to a child.

† *HUNTER* describes them, he saw their interior but during my visit the doors were locked and the brahman had gone to a fair.

various kinds, project in bold relief from the *sikras*, such as tigers which face the cardinal points, and *vairagis*, as large as life, which sit performing *tapasya*, on the top of the body of the *mandirs*, one at each corner of the front (or east) face. The temple to the right is to RÁMA CHANDRA, under whose porch reposes a marble *Seshsa*, his couch, as the name indicates, the circling wreaths of a snake. The left temple is a *Janárdan*, the reliever of distress.

Janánán dukham arddate-iti janárdana.

A black *Garuda*, squatted on the *Nág*, occupies the porch. In front two small *katris* like sentry boxes shelter the one, a *Goverdhana*, in white, the other, a *Keshoraí*, in black, marble: "the beautiful-haired," is surrounded by dancing figure. Two other forms of VISHNU sanctify *Ank-pát* a *Viswarupa*, and a *Sankudhara* whose silly story may be read in the *Bhagawatat*. These seven images* are all curved with much skill, and boast of great antiquity, though the temples which cover them are modern.

These modern temples seem not to have been erected by one person only, for though HUNTER ascribes them to RUNG RAO APPAH† the people of the place named the first MULHAR RAO as the founder. Perhaps MULHAR RAO made the smaller *mandirs*, and has got credit for the whole, by the judicious appropriation of a small fund, to the support of poor brahmans, ten of whom are daily fed at *Ank-pát* in his name. Some told me that AHALYA BAI' founded the charity, but this belief may have obtained from her name being more generally known.

A mound of earth separates *Damodar* from the *Vishnu Ságar*, a piece of water white with the favorite flower of the gods, the *lotus*. A little beyond is the *Gumti kund*, whose banks are lined with various buildings to MAHÁDEO, *Dharmasálas*, *chabutras*, &c. and whose waters communicate with the river of which it bears the name. SANDÍPAN, the tutor of KRISHNA, had made a vow to bathe once in 24 hours in the *Gumti*, but as travelling every day to the river and back again would have left him little leisure for the instruction of his pupils, the young god proposed bringing the river to *Oujein*, and he satisfied the pious scepticism of the domine, by desiring him to write on a piece of paper and to throw it into the *Gumti*: in a few hours the

* The *Avanti khand* mentions ten Vishnus. Of the other three, there is a *Parsattam* near the *Sola Sagur*, a brahman, the discomfiter of Bali, whose story is so well told by Southey, and a Baldeo at the *Gumti-kund*

† The Dewan of the Puar,—the compiler of the *Modern Traveller* seems to mistake him for the *rāja*.

paper was picked up in the crowd. On each side of the road as you now turn towards the town, the eye meets nothing but gardens, *baolis*, and pleasure houses, the property of two or three *gosains* and *vairagis* whom the liberality of the *Sindias* has enriched. Rent-free lands and exemption from duties enable them to trade with certainty of profit. They are of course far from being what their profession might imply, devotees; and though several of the edifices about *Oujein*, are due to their liberality, they were described to me as very *Don Juans*, the terror of every jealous husband in *Oujein**.

The only place I will stop to notice between these gardens and the city, is the *Sehesra Dhanakeswar*, a temple of *MAHADEO*. The sons of a *rāja* *BIDORUT* reposed after the fatigue of the chase, near a deep pool, which a *rishi* performing *tapasya* informed them was the abode of a *daitya*, who afflicted the whole earth, adding that their names would be for ever blessed, if they would rid the world of the tyrant. The young men accordingly collected an army and marched against the demon, who in a moment annihilated them all: the *rāja* in despair at the loss of his son, made supplication to *MAHADEO*, who pleased with his piety lent him the bow (*dhanak*), one arrow sent from which had the efficacy of a thousand. The *rāja* armed with the wonderful weapon destroyed the enemy, and in gratitude to his avenger so redoubled his prayers and penances that *MAHADEO* desired him to ask a favor. The pious king requested the deity to inhabit some *lingam* which might more exclusively be the object of his adoration. *MAHADEO* put his countenance into a stone, which he authorized him to worship as the *Sehesra Dhanakeswar*. The present temple is modern but handsome. Mass upon mass of ornamental carving is heaped upon the *sikra*, and the dome of the porch has painted in the interior some of the wonderful actions of the deity. Several smaller shrines sanctify the court around it, where is also a fine *baoli* constructed by *CHATUR GIRA GOSAIN*: a high wall encloses the whole. The building is ascribed to *SEDASHEO NAIK*, but who this was no one seemed to know. *SEDASHEO* is a common name in *Mahratta* history, but the person here spoken of was probably the benevolent banker of whom such an interesting anecdote is related by *HUNTER*†.

Passing over the ancient city without remark for the present, we reach *Rana khan*‡ garden which looks on the river where it flows past the

* As *TOD* has remarked, some of the richest inhabitants of *Malwa* and Central India are the mercantile *gosains*.

† The unfortunate leader at *Paniput* is never that I remember called *Naik*.

‡ I write the name after *MALCOLM* though it is pronounced as *GRANT DUFF* spells the word, *RANNAY KHAN*—I have never seen it written.

town ; the shade and the view of the ever busy gháts makes this a pleasant encamping place, and here I pitched my tents. A wall whose gates and bastions give it the appearance of a fort encloses a square of 150 yards. The interior is adorned with summer-houses, terraced walks, fountains and a pukka drain to circulate the water. At the south-east corner a domed *maqbarch* covers the remains of SHAMSHER KHAN the son of RANA KHAN. It is a handsome but not a costly building, the black stone is relieved by a red porphyry, (Spec. 5,) the same as that of which the *Joura* bridge is built, and which is quarried at *Rutlam* ; the tomb itself is of common brick without inscription or ornament. The garden of the lucky bhesti* boasts itself the most favorite spot for pic nics in all *Oujein*. This year (I write in March) being the predecessor of the *Singasta*, all the Hindu world was marrying, and there was no end of feasting and tom-toming. As my visit was also partly during the *Huli*† not a day passed in which the garden was not filled with groups of men and women enjoying themselves under the shade of the trees ; the women walked in procession, some old lady, a curious pyramid of flowers on her head, in the van leading a shrill chorus, in which all the rest joined, from the ancient grandame with her trembling treble to the little child trotting up in the rear. When they reached some suitable spot they squatted down in a circle and eat, chattered and sang till the day waned, when they marched back to their homes in like solemn procession. The gentlemen sat apart and like European gentlemen longer at table than the ladies. Instead of wine after dinner they indulged in the similar luxury of opium, either chewing it, or drinking it out of the palms of their hands. All the walks were strewn with the plates and dishes of these parties,—leaves of the bur neatly joined together. I asked the havildar of the garden whether his fruit trees and vegetables did not sometimes suffer from this crowd of visitors of whom a large proportion are mischievously aged boys ; he seemed indignant at the very supposition, and indeed he evidently enjoyed the fun of the feasting more than any one else, was the constant guest (perhaps 'tis the perquisite of his place) of one or other of the parties, and strutted about the walks with a rubicund visage and clothes all reeking with huli water.

* See his story in MALCOLM'S Cent. India 1, 119, GRANT DUFF, 3, 27 ; seems to doubt the romantic tale, but it is generally believed in *Malwa*.

† It is but fair to observe that though my visit was during the *Saturnalia*, the natives, with hardly an exception, behaved to me with civility and politeness, and this though I passed two or three times every day, a *νεροπαστα* which lay stretched across the principal street and is always the rendezvous of all the wits and blackguards of a town.

Oujein is surrounded on every side, but the south with an almost uninterrupted belt of groves and gardens. Their names, had I room for them, would be a history of the place and of its manners,—on one side lies the garden of DOWLET RAO, on the other that of his carpenter: here is the garden of a rája MALL, whose name has outlived his history*, while near and in contrast to it is another, which, but a few days ago, gloried in the name of the BAIZI' BAÍ, now published by a change of title the fickleness of fortune. The *Maháráj-Bágh*, (DOWLET RAO'S) was formerly the pride of five proprietors, but the modern AHAB, coveted his neighbour's vineyard, out of five small gardens made a large one, and deprived the owners of the inheritance of their fathers. The best of the gardens seem to have been planted by Musalmans, who, we learn from BABER, introduced the fashion into India: few of them have walls or indeed any apparent boundary.

The gháts before the town are neither numerous† nor handsome. The largest has the name of *Pisách-mochan* from a *lingam* near it, by *pújá* to which a demon (*Pisách*) had the term of his punishment abridged and became mukht or beatified. At the back of *Pisách-mochan*, a walled and shady enclosure contains the *chattrís* of some of the Sindia family. The most remarkable is that of RANAJI', the founder of their greatness‡.

Opposite this ghát on the left bank of the river, and half concealed in a grove, stands the *Akhara* or hospitium of DATTA TRE, an extensive building containing temples, *baolis*, and *dharmsálas* for the accommodation of holy pilgrims, who have also food served out to them from a fund supplied by the liberality of the sarkar or of the founder of the place, GOPAL GIR§ a gosáin; DATTA TRE is the 12th incarnation of VISHNU. A rishi by his penances so pleased the holy trinity that they promised to grant him any favor he should ask of them: he requested a son like unto themselves. And they each put a portion of

* There are two princes in the *Malwa* History whose names terminate in Mall: all the natives could tell me of the founder of the garden was that he was a *Qadím ká Rája*. They scouted the idea of his being a modern.

† The gháts at *Oujein* are 28 in number. But many of them are at a distance from the city.

‡ As RANAJI' was buried at *Shujahálpore*, the *chattri* here is merely honorary.

§ I much fear I have been misinformed here. The place is doubtless a Vaishnava math, and unless the word be taken cum brintia, would hardly have been built by a gosáin. I was unable to have an interview with the mahant by name PURAN GIR who could have satisfied my doubts. Several Saiva mendicants were about the place, but in this *Sivapuri* they are everywhere.

their divinity into the rishi's child, who was thence called the DATTA TRE or the three-gifted.

Between RANA KHAN's garden and the river, a small plain but much esteemed temple of KEDÁRESWAR attracts the eye : little worship is however, paid there except in *Aghan*, during the whole of which month, there is a continual melá around it, and the rest of MAHÁDEO's temples are deserted to do it honor. The story of the mountain god, one of the twelve chief lingas is found in the puráns, but the brahmans of *Oujein* have embellished the tale à leur façon. The deotas who dwelt in the snowy range complained to MAHÁDEO that they were tortured with never ceasing frost. MAHÁDEO sent for Himálaya and took him to task for being so cold. Let your abode be with us said the mountain and not only will we constantly adore you, but we'll abate our rigour for eight months of the year. The god consented and settling in the hill near a warm *kund*, a crowd of devotees came to worship him under his new name of KEDÁRESWAR, lord of the mountain stream. In process of time the world became so wicked that KEDÁRESWAR withdrew himself from the sight of man. One day some holy men, who still lingered about the spot their lord had consecrated, were lamenting his loss in most piteous strains, When shall we find such a god? Who is equal to him? &c. &c. suddenly a voice issued from the earth, "go to *Mahákál ban*, there I will appear in the river *Sipra*." With joyful hearts they hastened to *Oujein* and prayed by the banks of the holy river, when just as the sun shewed his first rays, a stone rose out of the water, and was immediately hailed as KEDÁRESWAR. Crime however has deprived *Oujein* of a part of the god,—shocked at the desolating wars of the Pándus, KEDÁRESWAR again fled the pollution of man, and concealed his countenance in the shape of a buffalo.

BHÍM SINGH in despair at the retreat of the god consulted a *rishi*, who explained the metamorphosis, and advised him to bestride the world like a colossus, while all the buffaloes in the earth should be made to pass between his legs. All passed but that which concealed the divinity, who could not submit to such degradation. BHÍM thinking, (to use the expression of the celebrated Bishop Fox,) that he had now "got god by the toe" ran to catch the beast, but it sank into the earth : subsequently KEDÁRESWAR's head rose up in the *Himálaya*, while the trunk alone reappeared at *Oujein*. It would be an endless task to recount even the names of the innumerable shrines which form the boast of *Oujein*. It is related that INDRA and his court, went to pay devotions at *Mahákál ban*, a forest 16 kos in

extent, which occupied the site of the city subsequently built. Learning however that there were seven crores of thousands, and seven crores of hundreds, of *lingas*, promiscuously scattered about the holy spot, they returned, unshrived, to *Amarawalipuri*, afraid lest while they were worshipping one *lingam*, their feet should unavoidably di-honor some other. Even in this age of sin and unbelief besides the countless ruined *mandirs*, and small enclosures and *chabutras* to *Nandi* and the ling, there are to *MAHÁDEO* alone 84 temples supported by the *sirkár*. The smallest has two rupees a month for the maintenance of a priest, and a trifling allowance for the expences of *pujá*. I will not trespass upon your patience further than to describe the three principal temples, the *Mahákál*, the *Nágchand* and the *Agasteswar*, which are distinguished from the rabble, the "*fauj*," by the names of *Rája*, *Kutwál*, and *Dewán*.

Mahákál is the handsomest, the most holy, the largest, and the richest, temple at *Oujein*. SCINDIA allows it 11, the *PUARS* of *Dewas* two, the *GUICKWAR* four, and *HOLKAR* two rupees a day*.

The greater part of the funds derived from these and many other sources, is, my pandit assured me, devoted to feeding poor brahmans, but the thinness of attendance at the *sadúbirt*, tempted me to answer him in the words of *EUCLIO* in the play.

Ego novi istas polypas qui sibi quicquid tetigerint, tenent.

Not to mention however the salaries of the servants, and the cost of keeping the buildings in repair, the expences of the worship alone must be very considerable; besides the ghee for the lamps, which burn night and day, the various kinds of food, the precious oils, and the ever renewed flowers, rich clothes and handsome ornaments must be provided to honor the god. Every Monday afternoon his servants bring out the five-faced *mukhat* and carry it in solemn procession to a sacred *kund*; attendants walk by the side of the light *vahana*, fanning it with peacock's feathers and brahmans call aloud the various names of their lord: "the unborn," "the never dying," "the universal soul," while the wild yell of the conch rends the air, and the incessant *naqárá*s, and the shouts of the multitude make hideous music. Having reverentially washed, and presented food to this brazen mask† they convey it to the temple and place it over the *lingam*, a stone

* The family of the latter formerly gave five rupees a day, the present representative, like his ancestor *JESWANT*, has no partiality for the sacred class.

† It has I am told, a washing of gold over it, but it is with that exception entirely of brass.

about a yard high*, which it fits like a cap, and entirely conceals. They now clothe the idol in silken robes, and throw wreathes of flowers and rich necklaces over it, while layers of costly carpets are now spread one over the other on the floor before the shrine. Again they repeat the pious mockery of offering food in silver vessels, the usual *pujá* is performed, and a *shástri* chaunts aloud during the greater part of the night, selected portions of the holy writings. On the other days of the week the *mukh* is locked up. No other temples, but the three lords, can boast of this head-piece to their lings. The *Málik*s of *Mahákál*, those who have the management of the funds, are Telinga brahmans. Bahorees, a Mewarri class, receive a monthly stipend to perform the *pujá*, and menial offices. The name of the divinity of the temple, that by which he is more correctly styled is ANANTA KALPESWAR, lord of ages, without beginning or end. The origin of this name and of the temple may be told in verse.

For proud pre-eminence of power,
 Brahma and Vishnu wild with rage contended;
 And Siva in his might
 Their dread contention ended:
 Before their sight,
 In form a fiery column did he tower,
 Whose height above the highest height extended,
 Whose depth below the deepest depth descended:
 Downwards its depth to sound,
 Vishnu a thousand years explored,
 The fathomless profound;
 And yet no base he found:
 Upwards to reach its head,
 Ten myriads of years the aspiring Brahma soared;
 Above him still the immeasurable spread.
 The rivals owned their lord.
 And trembled and adored.

The temple which formerly covered this self-same, so marvellously-extended, stone, (now shrunk into more convenient proportions) was enclosed by a wall a hundred cubits high; 300 years had been expended in its erection, and if as FRISTEN writes, it was the counterpart of *Somnath*, the wonderful fabric was supported by numerous pillars overlaid with plates of gold, and encrusted with rubies and emeralds. Instead of the greasy *chirág*hs, which now diffuse more smoke than light through the sanctum, one resplendent lamp alone illumined the glorious face, whose light, reflected back from innumerable

* I did not see the covering of the ling but verified my pandit's description by that of another brahman: the size of the stone is by no means remarkable. The phallus of the brother temple at *Hierapolis* was 180 feet high.

precious stones spread a refulgent lustre throughout the temple*. The building of which this exaggerated description is given, was destroyed by ALTAMSH, who thought to carry off in triumph the stone which even gods had respected. But the brahmans pretend that he took away a mere stone, for that the ling inhabited by divinity eluded in invisibility the polluting touch of the infidel. The present temple is said to have been built, (it was probably repaired only,) about a hundred years ago, by RAMCHANDRA BAPPU, dewan of RAM RAO|. It stands in the midst of the city, in the centre of an extensive court, enclosed by walls‡. Steps lead down from the western face to a small square tank, the *Kote Tirhut*, the bathing in which has the efficacy of a million pilgrimages, for *Garuda* filled it, by a drop of water from every sacred *kund* in the universe, and it thus partakes of the virtues of every one of them.

The court which surrounds the *kund*, is filled up with verandahs, partitioned into small cells and *séwals*, each occupied by an emblem of divinity. Above the verandahs are wooden *dhurmsilas*, where brahmans are daily fed, and lie sheltered from the heat of the sun. I have before alluded to the difficulty, which deterred the court of *Indra*, from worshipping at *Mahakâl*. NÁGCHAND, having told them of a ling, which absolved from the unintentional offence of treading on any other, they built a temple to distinguish it, which they called from the name of their informant, *Nagchandreswar*. The brahmans have a tradition, that NO RANG PADSHAH, (so they call AUR-UNGZEBE,) sent an army to destroy this, and all the other sacred images of *Oujein*, but no sooner had the infidels once struck the stone than a stream of blood issued from it, which becoming immediately converted into bees, stung the greater part of the intruders to death. Terrified by the prodigy, the emperor desisted from his impious design. This story is an amplification of the miracle related by TOP of the shrine of *Onkar*, though perhaps the fable may seem more applicable to *Oujein*, for here all the ancient images (if indeed as believed they

* PRICE, FERISHTEH, MAURICE.

† Every one we asked gave the same names, but I can find none such in Mahratta history. It may be a corruption of RAMCHANDRA BABA (Shenwee), the protege of BALLAJI' BAJI' RAO, who was dewan of both KANAGEE SCINDIA and of SADASHEO RAO.

‡ There is a description of it in a late number of the E. I. U. S. J. The author of the paper rather strangely mistakes this monarch of lings for a temple of VISHNU. The same writer miscalls a statue of Reessil Muni near Bhirtary's cave a *Parimáth*. The image which the brahmans pretended to conceal, was either the *mukhat*, or more probably, a device to extort money.

are the original images), stand unmutilated, while at *Mandatta*, nearly every figure has lost a nose, or a limb, and in one place, where a very beautiful temple was approached by avenues of large elephants, not only has the temple been violently thrown down, but the trunk of almost every elephant has been barbarously cut off and thrown into the river*. The history of AGASTESWAR, one of the twelve lings, (at *Dwārika*.) contains a pleasing moral. The dewtās defeated by *laityas* applied for assistance to AGASTA. They found the saint performing *tapasya*, his thoughts abstracted from worldly concerns, and his eyes closed in deep devotion. At the tale of their wrongs, however, his eyes opened and such angry fire flashed from them that in an instant the *daityas* were annihilated. But when the holy man reflected that the province of saints is not to destroy but to save, माघको चाहो शोक स्वभावसे रहै, sorrow seized his soul. Vain had been his prayers and fasts, his dreadful penances and long probation, one moment of anger had cancelled them all, and with an exhausted body and broken spirit, he prepared to seek absolution for his sin in a tedious course of unrelenting severities. But the god he had worshipped took compassion upon him. Desired to make what request he pleased, the sage only begged remission from his crime, and that the deity would inhabit some ling to which he might for ever express his gratitude. Ευχης δικαιος ουκ ανηκοτος θεος; MAHĀDEO pardoned the supplicant; oblivion restored serenity to his mind, and the ling of AGASTESWAR still relieves the repentant sinner from the gnawings of an evil conscience. Besides these 84 lings there are 11 ancient Rudras, each of which has a distinguishing appellation. The skull-adorned, the three-eyed, the air-clothed (*i. e.* naked), he who wears a turban of matted hair, whose ornaments are snakes, who wanders where he lists, the lord of light, &c † All these forms are represented by the ling, and the temples which cover them are for the most part small and plain. The Ganeshas can hardly be numbered, but six are distinguished by superior antiquity and by sesquipedilian names: there is also a Chintāmani of much repute, a few miles from *Oujein*. The *chaturthi* (4th) of every month‡, is devoted to its worship and in the month of *Chaitra*, there is a melah on the four Wednesdays. We find twenty-four *matas* and three *devīs* mentioned in the *Avanti khand*; the *devīs* being a *Lakshmī*, a *Saraswatī* and an *Annāpurnā*, they are all

* See TOB's Rajasthan, 2 : 395, note.

† *Kapālī*, *Trilochan*, *Digambar*, *Jatadhari*, *Surup surbang mukhar*, *Vāma-chari*, *Kulanāth*, &c.

‡ The 4th day of the month is always kept as a fast by pious Hindus.

still worshipped, but I learnt nothing regarding them worthy of remembrance.

The temple of *Harsuddi* (included in the *Matas*) deserves more than a passing notice. It is celebrated for its antiquity, its holiness, and for containing the identical idol, so devoutly worshipped by the *VIKRAMAS*. On a shelf behind the image, is a head carved in stone, regarding which a singular tradition obtains.

VIKRAMAJI'T was in the habit of every day cutting off his head, and of presenting it to the blood-thirsty *Devî*, the goddess generously restored the offering and replaced it uninjured on its shoulders. The king at length in an excess of devotion vowed that on no day should food or drink pass his lips, till the extraordinary sacrifice had been performed. One luckless morning however, he lost his way out hunting, and feeling so overpowered with fatigue and thirst, that he could proceed no further, he cut off his head and desired his attendants to take and present it to the accustomed shrine. As they were carrying the head along, some flies feasted on it, and the goddess disgusted with the half-eaten offering, in her indignation converted it into stone; the expecting corpse shared the same fate; the head has ever since occupied a place in the temple, and the petrified trunk is still, it is believed, to be seen in the neighbourhood, though in so secluded a spot that the seeker must lose his way to find it. A different version of the tale relates, that the king was fighting with *SALIVAHAN* on the banks of the *Nerbudda*, and that unable to leave the field he sent his head in a golden charger and wrapped in rich clothes to *HARSUDDI*. A kite attracted by the smell of blood carried off the head, but soon dropping so tough a morsel, it was taken thus mangled and dirty to the shrine of the goddess, who spurning with her foot the unwashed* banquet it became stone. We read in *WILFORD*'s puzzling essay on the *Vikramas*, that one of the peculiarities of these princes, was the being always ready to offer up their heads to *Devî*: none however are supposed to have performed the sacrifice more than ten times, for so many times only had their attendant demon the power of restoring them to life. *VIKRAMAJI'T* indeed at last lost his head for aye, but it was not on this occasion cut off by himself, but by his enemy and conqueror *SALIVAHAN*. The story here told is evidently made up from some of the numerous fables which are extant on the subject.

The temple, a huge pile without sikra, contains besides the principal

* "When a sacrifice is made to *Chandika* the victim's head having been cut off must be *sprinkled with water*."—*As. Res.* 5 : 390.

idol, a Ganesha, several lings, &c. and has an allowance of five rupees a day from the sirkár.

The Málíks of most of the *matas* are gosáíns or málís ; brahmans of course perform the pujá. Of the modern temples the principal shelter forms of VISHNU. . An *Ananta*, distinguished only by its white sikra from the surrounding buildings, stands immediately opposite to RANA KHAN's garden. It is only opened in the evening. I was not permitted to approach nearer the idol, than the edge of a low room, supported upon numerous wooden pillars, and about thirty feet square. This room was dark, which gave a theatrical effect to the lighted recess in the back ground, where the god and LAKSHMI' sit dressed in rich clothes : GARUDA waits in front, while two or three brahmans reading the scriptures in a low tone before them, increase the picturesque of the scene. Nearly touching this, is a temple to *Bhagawán*, which differs in no respect from the last, but in the absence of a Sikra. The fortunate god supported by LAKSHMI', and SÍ'TA, all gaily dressed adorns the recess, GARUDA occupies his usual place, and at the feet of the deities are ranged numerous small brass images, of the various forms of the god. This place was built and is supported by the rája of Baglí. Here also as at the last temple, and for the same purpose, that of heightening the effect, the spectator admires in darkness and at a distance.

The *Sedusheo Nuik*, who has been before alluded to, has left another monument of his munificence, in a splendid temple to *Junarddana* in the very heart of the city which from its convenient situation, and from the scriptures being daily read aloud there, has numerous votaries. Four handsome sewalas occupy the corners of the enclosing quadrangle, and ten brahmans (the number was formerly 50) daily receive food in the *dhurmsálas*. I was told also of a *Jaggan-náth* and a *Badrináth* worth visiting, but want of leisure prevented my seeing them. The latter was built by the subscription of the baniahs, and is said to be large and handsome. I must not omit among the modern temples that of which the *Jains* were so unceremoniously deprived*. This fine building bears the expressive names of *Jubares-war*, the *Zaberdast*, and *Jain Banjaniswar*, the *Jain*-expelling lord. The ling, from the circumstances attending its consecration, has numerous votaries, though considered far inferior in sanctity to the more ancient shrines. The exiled *Párisnáth*, stands in a humble *kotri*, quite close to the splendid mansion which was built for him, but I could not obtain a sight of his image. Indeed my information regarding the

* See the story in MALCOLM's Central India.

Jains is very unsatisfactory. They are, and have some cause to be, jealous of strangers, and will not admit them into their sanctuaries. From an *Oujein Jatti* with whom I have lately become acquainted, I learn that they have 16 mandirs in the city; 13 *Sitambari*, and 3 *Digambari*. The *Sitambari* are always the most numerous in *Malwa* towns; the resident *Jattis* are not more than 12 in number. Of the temples, three or four seem ancient: a subterraneous one to *Párisnáth* more particularly so. It is near or upon the site of the old city, and cannot be visited even during the day without a light. A *Párisnáth* also about ten miles from the town has the reputation of antiquity, and *tirath* (pilgrimage) is performed to it twice a year.

The *Rámānehi* sect does not appear to have spread much to the south of *Mokandarra*, nor could their pure philosophy be expected to flourish in the superstitious atmosphere of *Oujein*. They have however one plain temple in the city, and about 12 *Sadhús**. I do not particularize any of the other sects as they generally join in worship at their respective *Vishnava* or *Siva* temples. The *Dadus* and *Kabir Panthis* are common amongst the military, while the courts of *Vishnu* are filled with *Ramavuts* and *Ramanujus*, but the varieties of gosaíns are perhaps less than might be expected, and of any local peculiarities no information has reached me. My catalogue of the holy things of *Oujein* is not yet exhausted.

At the foot of nearly every tree, commemorating the courage or weakness of woman, leans a *sati* stone, which some pious hand has removed from its ruined chabutra, and set up to be worshipped in the shade. These tablets have usually sculptured on them a male and one or more female figures, with a symbol to mark the rank of the deceased; as a horse for the cavalier, a cow for the brahman, and for the *Rajput* (I suppose) a sun and moon†. Sometimes the figures are more numerous; horses and attendants crowd the field, and a dome supported on pillars protects the stone from the sun and rain. On a few, apparently the most ancient, the female figure is so gracefully expressed that I more than once felt tempted to commit a sacrilege and to steal one to adorn my study. Near *SHAH DAWAL'S Dargáh* where a battle was fought‡, the groves are studded with such affecting monuments which are supposed to cover the remains of the slain. *Pujá* is commonly paid to these stones; they are found let into the walls of tem-

* They have also three or four *Ramdivaras* at *Indore*.

† Some of the stones scattered about have merely warriors on them without any female figure. They may have some connection with the commemorative tablets mentioned by Col. SYKES in his Essay—*Journ. Roy. As. Soc.* 4.

‡ HUNTER gives a history of the battle.

ples, or resting against the door, or occupying a deserted sewala, and the pious villager as he passes one under a tree mistakes the sculpture for some form of divinity and besmears it with ochre. Milk once rained at *Rome* but it was polluted with blood. *Lycus* tells of a fountain in India from which the natives fed their lamps. But the streams of *Onjein* more rich and curious, produce not a polluted liquid, or mere food for lamps, but milk, fresh, wholesome milk. *ABUL FAZL* who believed that the *Sipra* displayed this phenomenon*, was not aware that other waters of the vicinity have the same property. Of seven sacred tanks at *Onjein* two occasionally manifest the miracle. The *Rudra Sâgar*†, or rather the *dâdh-talao* which is near it, and the *Khair* (*Kshira*) *Sâgar*, which derives its name from the mess so called made of rice and milk. A like prodigy is related of a pool near *Chitrakot*h in *Bundelkhand*, which may be annually verified on the dark half of the month *Kartik* during the night only.

The miracle is sometimes reversed; for the *Sola Sâgar*, which is now a large piece of water, was originally a small cup of milk. A rishi observing that his cows returned from grazing with undistended udders, concealed himself and detected a *gowala* in the act of milking the cows. The discovered thief ran away, and in his haste dropped the vessel which contained the stolen milk,—the spilt milk was the origin of *Sola Sâgar*.

The credulous *Onjeinîs* receive, in its literal sense, the name of another of the lakes, the *Ratna Sâgar*, and believe that precious stones at times rise out of the water and glitter in the eyes of the fortunate worshipper. It was originally no doubt a mere complimentary epithet, just as the *Dee* is called the *Ratnâkara* or house of gems. But the *Sipra* is, par excellence, the stream of wonders. Its sanctity commences about four miles south of *Onjein* at the *Triveni*, where the three waters the *Riatka*, the *Rutkia*, and the *Chippra*, (*Sipra*) meet. During the drought which desolated this part of India three or four years ago, so little water remained in the river, that the citizens became alarmed. Numerous were the prayers, the homas, the offerings of ghee and milk on its banks. "One morning (I use the words of the chief *Mullâ* of the *Bhoras* who prefaced his tale with the ominous caution of "you'll not believe me") I went down to the ghâts, what was my astonishment at finding the bed of the river which I had left nearly dry a few

* It is amusing to find *GLADWIN* taxing his ingenuity to explain this—why did he not also explain the *Parus-pattal* and the mermaids.

† The *Rudra Sagar* is not unfrequently dry; the natives tell you that bones thrown into it in the rains, are decomposed, by the time that the dry weather exposes its bed.

hours before, covered with water a foot deep. No rain had fallen at the city or for 20 miles round, it was a visible interposition of God."—I am not surprised at the credulity of the Bohra, at his telling that he saw what he never could have seen; ignorance is always more ready to wonder than to investigate;—'sanctius et reverentius visum de actis deorum credere quam scire.' The disease of superstition which converts "the freshest sandal-wood into a flame of fire"* has infected every class at *Oujein*, where miracles are daily believed which seem to defy belief. During my visit, a gosaín ran an iron stake through his body;—a brahman passed his hand over the wound and cured it†. The Musalmáns in their turn, boast of a faqir, who has been for years in the habit of standing in the open air when it rains; the water separates in a cone over his head and does not wet his body. ‡The frequent recurrence of and ready faith in these miracles, "seen, heard, attested, every thing but true," teach us, how cautiously we must receive, when superstition is concerned, the testimony of witnesses however numerous, or disinterested; and perhaps in like cases the most rational rule, is almost to adopt the paradox of MACKENZIE, and "to doubt of strong evidence from the very circumstance of its strength."

The Hindus of *Oujein* do not seem to be much troubled with sectarianism; though MAHÁDEV is of course the most popular divinity, the worshippers of other gods are not molested, nor are the objects of their worship neglected.—A brahman whom I questioned on the subject said in answer, "we treat our deities as you English gentlemen do your friends in a cantonment. We call on them all round but are more intimate with some than with others." It would be difficult to form an estimate of the number of places at this city which are devoted to the worship of the brahmanical Pantheon, but ABUL FAZL certainly speaks within bounds when he enumerates them at 360.

Leaving for the present the Hindu and his faith, let us devote a few lines to the followers of the prophet. The orthodox sect of Musalmáns, during the fighting times of the first SINDIA, attained consider-

* Sentiment of an Indian author quoted by Sir W. JONES.

† I was to have witnessed this trick, but was prevented by illness.

‡ JEHANGIR tells us that a shower of gold fell in his presence on the head of a saint. The emperor perhaps never saw it, for he is a most unblushing fabulist: or if he did, even his credulity seems to have suspected a trick, for he speaks doubtfully of it and his courtiers laughed at the saint and his miracle; but in the case of our faqir a trick seems out of the question, and the numbers who tell the tale must believe it, on hearsay.

able consequence in *Mulwá*, but they are now few in number, without power and without money. The principal family, at the court of MAHADJI' SINDIA was that of A'DIL BEG*, of which it may be convenient to give a short account, as to its members most of the Musalmán buildings of *Oujein* are due.

A'DIL BEG,	{	By a wife	By some mistress
		1. ABDUL HAKI'M BEG.	CHAMMAN BEG.
		2. MANOWAR BEG.	
		3. ANWAR BEG.	

Of A'DIL BEG's history I know nothing†. To his eldest son a few lines only, in MALCOLM's Central India, are devoted. But he is much celebrated in *Malwá*, and was sent on several important embassies. On one occasion, when he was vakeel to the *Oude* court, ASUF UD DOULA, pressed him to remain in his service. ABDUL HAKI'M excused himself in a compliment to both his patrons which raised him in the estimation of the Vizier and much endeared him to SINDIA. It is said that whenever he entered the *Durbar*, his *Mahratta* master rose slightly from the cushion, (an honor he paid to no one else) calling to him in a friendly manner as *sáhib* and seating him by his side. One day being sulky or lazy he neglected the ceremony. The mortified BEG returned home, dismissed his establishment, and retired in the garb of a *faqir* to a neighbouring mosque. Three or four days afterwards MAHADJI' remarking his non-attendance at court inquired the reason. "No one" said his brothers, "knows quelle mouche piquée but he has turned *faqir* and is telling his beads in his father's *masjid*." SINDIA immediately rose from the *darbar*, hastened to the mosque and addressing the pretended *faqir*, said, "what is the meaning of this?" "My lord," replied the nobleman, "I am your slave and live only in your favor; you have always distinguished me above the rest of your court by rising when I entered the *darbar*. It was a trifle no doubt, but a trifle on which hung my honor and dignity: the last time I approached the presence you received me without the usual compliment, exposing me to the sneers and reflections of my enemies and to the mortification of thinking that I have lost your affection. What business have I at a court where I am no longer regarded." MAHADJI' made no answer, but taking him by the arm with a gentle violence brought him back to the palace.

* I do not mention RANA KHAN, as his history is comparatively well known.

† I may as well premise that my library is scanty, I have neither PRINSEP's *Ameer Khan*, nor BRIGG's *Mahomedan History*. The gallant A'DIL BEG, in the RANA of *Oudeypoor's* service was a *Sindi*. The father of ABDUL HAKI'M, I believe, a *Deccan Musalmán*.

He continued in great favor for some time, but seems, at last to have been supplanted by CHAMMAN BEG. The rise of this younger brother is curious. It appears that while all his family were in power, CHAMMAN BEG alone had remained without appointments. He became however intimate with the dewan who introduced him to his master. SINDIA surprised that a son of A'DIL BEG should till then have been unknown to him, asked ABDUL HAKI'M how many sons his father had left, "three" he answered, repeating their names. "And CHAMMAN BEG?" "O he's not my brother, but the son of some slave girl." Boiling with rage the equally low-born Mahratta turned his back on the blundering BEG.—CHAMMAN WAS immediately taken into favor, was sent to take charge of *Mandeswar*, and subsequently rose to great power and distinction.

MANOWAR BEG had some command near *Bhurtapore*, but being defeated by the Jats he returned in disgrace and was never afterwards employed. The district of *Mandeswar* had been entrusted to A'NWAR BEG but he was removed to make way for his illegitimate brother*.

Of about fifty mosques not more than seven or eight are at present frequented. The principal two very handsome buildings in the midst of the city bear the names of the founders A'DIL and CHAMMAN BEG. One of the deserted mosques is called *Bé-neo*, or without foundation, because the under surface of the lower range of stones of its walls, is on an exact level with the ground about it, and really as the place is small and low, and built on the crest of a hill, it may possibly have no foundation. The *Oujeints*, however, confirm the propriety of the name by a fable which has certainly no foundation. A Kábul faqir took it into his head to travel, but unwilling to leave a favorite mosque he carried it about with him on his shoulders. Arriving at last at *Oujein*, a brother faqir whom he had formerly known, called out, "Friend, what are you carrying that great thing about for, put it down here." The weary traveller deposited his load, but never took it up again, for charmed with the place, he made it his home, and a small tomb in the court of the mosque is shewn as the spot where rest his remains†.

There is an Arabic inscription over the door, consisting apparently,

* I cannot help, even at the hazard of being tedious, again apologizing for the meagreness of these details, information regarding the personal histories of individuals is easily obtained by men in office, but with great difficulty by a subaltern in a cantonment.

† A Jain assured me that this place was an *spasra* or reading room of his sect, but it is evidently a Musalmán building.

of extracts from the qurán, but I was too pressed for time to stay and decipher the nearly obliterated letters which were placed too high to be read from the ground. But few of the other Musalmán buildings merit description. In the heart of the city and close together, the tombs of two ladies stand in quadrangles, enclosed by walls. One covers RĒKMAT BÍ'BÍ, a person more celebrated for liberality than modesty, for she annually expended in a tazeea 700 rupees of the wages of prostitution. The occupier of the next tomb would be shocked at its vicinity to so unchaste a character. She was the beautiful wife of a Nawáb BAKHTÁR KHÁN, whose affection for her induced him, in her last illness, to summon a learned Hakím from *Surat*. But in spite of the arguments and prayers of her friends the prudish lady would not consent to her pulse being felt by a stranger. The doctor suggested that she should hold one end of a string, passed through as many doors and walls as she pleased, while he by feeling the other end would judge of the state of her body. The lady seemingly consented, but tied her corner of the string to a cat's neck. Alas! cried the doctor from without, that cat is starving to death, pray give it something to eat. The husband enraged with the fastidiousness of his wife insisted upon her again holding the string, but when he left the room she tied it to a post. The doctor who was not to be deceived instantly in a rage quitted the house, and the lady fell a martyr to her too-scrupulous delicacy. Much treasure is supposed to have been buried with her, but it is now no longer searched for, for it is believed that a party formerly employed in the unholy act of endeavouring to rob the dead, lighted upon the spot where the body was deposited. It was found lying in a sandal wood cradle and the face so piously concealed during life, became by a cruel fatality exposed after death to the vulgar gaze of these sacrilegious men. The worm had not outraged the fair lineaments, and the modesty of the beautiful features struck such remorse into the hearts of the plunderers, that filled with pity and shame they immediately covered up the grave, and no one has ever since been impious enough to violate its sanctity. These two tombs are adorned both externally and in the interior with slabs of white marble, having sentences of the qurán sculptured on them. I looked in vain for any inscriptions which would certify to the occupants of the buildings, as I have heard them ascribed to different individuals than those to whom I have assigned them.

Of the other tombs, one to ISMAEL KHAN RUMÍ' occupies a conspicuous situation, the crest of one of the hills of the old city. Of the

history of the KHAN I am ignorant. I was equally unsuccessful in learning any thing regarding the cemeteries of two saints, PIR MACHAM and SHAH DAWEL, both of which are beautifully situated in groves outside the city. A singular superstition is connected with the burial place of a third saint, PIR KHIR, or as he is more properly called PIR KARRA ; the last name originating in the belief that before the suppliant at the tomb can take rest, his wishes are granted.

Women desirous of progeny bake four flat cakes of flour, and crowning them with small pieces of meat and fruits, set them floating in a baoli near the tomb. If the saint is propitious, two are said to sink, and the other two having been first carried to the opposite side of the well, return back to the happy votaress.

As a not inaccurate method of calculating the Musalmán population of an Indian city, I visited on the *Bakríd*, the *idgáh* at which all the faithful are sure to be present, whom age and sickness have not confined to the house*.

An immense crowd had assembled but a large proportion of it was composed of idle spectators, or petty merchants, and I should not suppose that the number of Musalmáns was greater than 2,000.

The Musalmáns agree better with the idol-loving Hindus, than with the followers of their own prophet, the *bohras*.

The Mahrattas and Musalmáns, indeed have in a strange manner amalgamated their religions. AMIR KHÁN paid a brahman to pray for him at *Rashkar* : HOLKAR always provides two tazeeas at the moharram, and gives presents to the water-carriers, while many of the Mahrattas appear dressed in green turbans, &c. on the *katil ká rát*. But the *bohra* can never conceal his opinions, is for every blurting out his creed, and seems longing to have a hearty curse at the three caliphs. Their chief mullá was my constant companion during my visit to *Oujein*. Sitting on one occasion with a munshi and myself, he asked interminable questions regarding our manners and customs. But the day was hot and the mullá is old : he grew sleepy : “ *l'admirait ton-jours mais il bailloit quel que fois*” and every yawn was finished off with a piously prolonged Y—a A—l—i. These exclamations became at last so frequent that I could perceive my munshi wincing under the infliction, and he told me afterwards that he should have been much offended “ but he's an old man and thank God I've seen the world.” As might be expected quarrels between the bohras and sunnis, are not unfrequent, and in a fray which occurred at *Mandiswara* a few years ago,

* This method will not apply to a cantonment, where each regiment has its private praying-place.

the chief mullá narrowly escaped with his life*. A sunní will not receive a glass of water from a bohra, unless poured out before his eyes from the latter's lotá, who would it is declared, certainly spit in it if the other turned his back for a moment.

The early history of the bohras is involved in much obscurity : MALCOLM, who asserts that they are descended from the Hassanís, has not informed us, whether he derived his knowledge from common report, or written authorities, and omits to notice that COLEBROOKE and others have on strong grounds† disputed that extraction.

Of this interesting tribe, I at one time entertained a hope of being able to send you a more satisfactory history, than can be gleaned from the accompanying meagre notes : for on paying a visit to the chief mullá's house, I was delighted with the sight of nearly 200 volumes of Arabic lore, from which he promised to permit me to make whatever extracts I pleased. But the mullá is old, cautious and avaricious, and though still profuse of his promises of giving me the use of his library, I have not as yet been able to procure even a catalogue of it, and the scanty information which in answer to my queries, and to whet my curiosity, he sends me piecemeal, in letters, is of that description, which the Hindus call, *A'tpatung*, in which nec pes, nec caput, &c.‡ Perhaps, however, he tells little, because he has little to tell. I am the more inclined to this suspicion, from the nature of a few extracts, hastily made, from two or three books which he pointed out to me, as the most respectable authority on the subject of his creed. Of the value of these you may judge from the following specimen§.

"A man, named YAKÚ'B, obliged to quit his country from some domestic or party feud, was the first of his sect who put his foot in India, having left *Egypt* and landed at *Cambat*, A. H. 532, A. D. 1137.

* See HEBER'S Journal, vol. II.

† Their not rejecting the last five Imams, their peaceable pursuits, &c.

‡ He promises to pay me a visit in the cold weather bringing all his books. Should he not fail me, I will send you notice of any thing I may find curious in them: D. HERBELOT mentions a few histories of *Yemen* for which I inquired, but the mullá did not seem to know of them. I remember the titles of a few of the bohra MSS. منتزع الاخبار عيون الاخبار شرح.

§ The extracts, mere rough translations, are distinguished by inverted commas. Of the history of the sect before 532, I am ashamed to send but in a note the confused story of the mullá. The first Persian apparently of whom their chronicles speak, is one "SOLEYMAN FARSEE," who emigrated from *Fars* or *Hamadán*, (I suppose to Arabia,) and was the bosom friend of (there a word seems wanting) "BIN MAHOMED IL MUSTAPHA." ?

At this time, the chief mullá of the sect, (which had been for some years settled in *Yemen*,) was ZOHEIB BIN MUSA. Egypt obeyed the rule of the caliph MOSTEMSIR BILLAH, and SADRAS SINGH governed the Hindu kingdom of *Píranpatam*."

NOW MOSTEMSIR, say most authorities, died A. H. 487, and his grandson HAFEDH, the 11th caliph, reigned from 524 to 544.

The *Guzerát* chronicles, though very confused at this period, agree better with the above date; for SIDDHA, or JAYA SINGH, of which SADRAS may be a corruption, was king of *Anhulwaranpatam* in 1094. YAKU'B having landed at *Cambay*, was received into the house of a máli named KELA, whose hospitality to a stranger soon met a reward, for the garden-well becoming dry, the prayers of his guest caused water again to rise in it. The gardener naturally approving of such a convenient faith, immediately adopted it, and YAKU'B learning the Gujeráti language with surprising quickness, soon gained as a second proselyte, a boy the son of a brahman.

The king SADRAS, and his two dewans, the brothers TÁRMALL and BÁRMALL, used to pay frequent visits to *Cambat*, for the purpose of performing pujá at a temple, much celebrated for an iron elephant, which hung in mid air, a *chamakpán* having been let into the roof above it. The zealous YAKU'B caused a block of stone to be cut to the size and shape of the loadstone, removed the original slab, and substituting his own, the elephant of course fell to the ground*. The daring author of the profanation, who made no secret of it, but when they were eagerly searching for him, boastfully exclaimed, "adsum qui feci," would have been immediately sacrificed to the rage of the idolators, but he represented that it was folly to put him to death, merely because he was more powerful than their god, of which he had already given them one proof, and of which he was prepared to offer another. Let your god said he, dry up that tank, if he succeed kill me; if he fail acknowledge my superiority. The eloquence of the preacher touched the simple Indians, who consented with joy to the trial; but

* It will immediately occur to your recollection that the *Gaznavide* MAHMUD performed the feat in the same country; Dow, i. 71. The story is a very old one, and BAYLE in his article "Mahomet" gives some amusing quotations on the subject.

YAKU'B might have learnt the secret at *Alexandria*, where in the temple of Serapis there was a similar argumentum demonis.—Sed cum quidam dei servus inspiratus id intellexisset magnetem lapidem e camera substroxit, &c. &c. PRIDEAUX, who had a large faith, and others have argued upon the possibility of the suspension.

in vain the brahmans, like the priests of old, called on the name of their BAAL, from morn even unto night, saying, BAAL, hear us. Their lord was peradventure asleep, for he heard them not, and the waters remained unmoved and undisturbed. YAKU'B stood by, like ELIJA, and mocked them, and when at last in despair they relinquished their fruitless task, he by a few prayers and incantations caused the waters to retire. I have dwelt the longer upon this fable because it confirms the fact of a connexion with *Egypt**, by the singular coincidence of the drying up of the tank, with a well known superstition peculiar to that country. In DE SACY'S *Abd Allatif* the curious may read the whole process by which the African magicians absorbed water; a small image, the letters T and H, some string, a little pigeon's blood, &c. being the simple ingredients of their talisman†.

But YAKU'B's skill was not confined to depriving a pool of its water. At the king's request he again replenished the exhausted tank, and SADRAS and his court, won by such a succession of miracles, embraced the religion of their author. "Of a truth" says SADI, "every one is born with a disposition to Islāmism." The inhabitants of the neighbourhood soon followed the example of their lords, and in a few days a numerous population was repeating the *Imāmiyeh kulma*. The Indian converts, who being generally merchants, were distinguished by the name of *bohras* (*byohar*, traffic) were obliged, from their ignorance of Arabic, to refer to their brethren at *Yemen* whom they looked up to as superiors in all questions regarding the laws and ceremonies of their religion, just as the Parsis of *Hindustán* obtained their *revaiuts* from the more learned guebres of *Yezd*. As it is the duty also of every Bohra to perform once in his life a haj to his chief mullá, an active intercourse subsisted between *Yemen* and *Cambay*, the pious pilgrims doubtless mingling some attention to interest with their spiritual functions‡, and in going and returning

* *Yemen* was at this period a tributary of *Egypt*.

† See fourth appendix to the *Relation de Egypte*. The verses which contain the mystery are too long for insertion here, excepting the opening lines which have an amusing solemnity. "Toi qui desires apprendre le secret de faire absorber les eaux ecoute les paroles de verité que t'enseigne un homme bien instruit," &c. The object of drying up water was to uncover hidden treasure, the letter T was always used in African magic, it was the figure of the cross with which the height of the Nile was measured, what H signified I cannot remember. You will have remarked that the names *Kela* and *Chamakpón* (*Chambaka pathar*), are Hindi, though the work from which I extracted them was Arabic.

‡ That such has been the practice from the days of the Crusade till the present time, see ROBERTSON'S disquisition.

providing such an assortment of goods as enriched both themselves and the Yemenites.

A mutual interchange of good offices thus established, it is not surprising that the latter when driven from Arabia by some revolution should have sought refuge with their Indian brethren, by whom as was expected, they were honorably and affectionately received. The whole tribe with the exception of a few who are said to have fled into Persia, perhaps in gratitude to their hosts or from similarity of pursuits, adopted on their arrival in India the name of bohras, assumed their dress and learnt their language. The old mullá had been enumerating to me in guttural tones the chief priests from 532 to the date of the final settlement in India, insisting that I should write them all down though they consisted of such fatiguing long names as "*Sayyad ya faqir uddin, Abdullah bin ali bin Muhamed bin Hátem*" and was about to tell me the date of the emigration, when I assured him that he need not trouble himself as I had an infallible method of discovering it. Making them some shew of figures and circles I multiplied the number of mullás 23 by 17, and the product came singularly near the truth, for the grand emigration was in 946. It was amusing to witness the old man's astonishment; every visitor who dropped in, mullás and others he eagerly told of the wonderful calculation. They all elevated their eyebrows stroked their breasts and drawled out a Yá Ali*.

The troubles which obliged the bohras to leave "happy Arabia" are doubtless connected with the invasion of the Turkish emperor SOLEIMAN, who in 1538 conquered the kingdom of Yemen†. Of this event we have no very detailed account, and perhaps the bohra chronicles will throw light upon CANTEMIR's meagre notice‡. The *Guzerát* historians of this period are too busy with the murders and depositions of the last weak kings of *Ahmedabad* to remark the entrance into the country of a few poor fugitives, and the bohras,

* I had shortened Ton's average of reigns as an adult only can succeed to the *bohra-gaddi*, but my average was too little; for the succeeding period it would have been too long, for as there were 22 priests 14 would be nearer the average of each reign.

† The Turkish troops followed the steps of the fugitives, for it was in this year that they made an attack upon *Diu* when four lamps suspended to the mast of every ship of the Portuguese fleet frightened the gallant army from the Indian shores.

‡ A work mentioned in D. HERBELOT's article *Jaman* would probably describe the event at large, as it was written but a few years afterwards.

sheltered in their insignificance, do not seem to have been hindered*, and probably profited by the troubled state of the kingdom, and soon spread themselves over *Guzerat* and *Hindustan* settling at *Surat*, *Ahmedabad*, *Sidpore*, *Burhanpore*, *Oujein* and *Rampura*. Their numbers at present may be roughly estimated at 100,000 souls†.

The most remarkable person of the sect at *Oujein*, is decidedly their head mullá, *ESAU*, to whom all Europeans apply for information on visiting the city, for as he has resided there about 40 years; he is a living chronicle of the "times of trouble" and to boot like *CREBILLON*'s *Sháh Bahmun*, 'il est sans contredit l'homme de sa ville qui possède le mieux l'histoire des événemens qui ne sont jamais arrivés.'

It is a mistake to suppose that he partakes of any of the divine authority with which the bohras invest their chief priest, of whose orders he is merely the organ; nor has he any particular respect paid him by his flock; for as we walked together at a *melá*, where numbers of them were assembled, I remarked that they almost all passed him without notice or salutation. He seemed to guess my thoughts, and said rather tartly, 'we are a plain people, not addicted to bowing and scraping.'

The succession among the chief priests, is solely determined by the will of the reigning mullá, who in case of incapacity in his own family, from youth, bad conduct, &c. will transfer the honor to another house; and one of the first acts on ascending the *gaddí*, is to nominate the next heir to it. The last mullá, who was the *saggá* brother of mullá *ESAU*, died in the beginning of March, and was succeeded by *MAHOMED BADAR U'DDI'N* who is about 27 years of age. The bohras have three separate wards in *Oujein*, or as they themselves count them five, for two are large and double. Their religious buildings are hardly worth visiting except perhaps one mosque, to which is attached a low, small, dark room where rest the remains of 7 or 8 of their chief mullás: the tombs are placed side by side, on a raised foundation of fine white marble, on which verses of the *qurán* are thickly sculptured. A sort of awning is spread above them consisting of a board, into which pieces of looking glass are closely fitted together, and these with the common wall shades round the room give it the neat but tawdry appearance which characterises their shops. When lighted up on festivals, it may look gay enough, but on common days, its only ornament, the pure marble (to preserve

* There is a slight allusion to their having been expelled from *Sidpore* and *Ahmedabad*.

† I speak from native authority, without means of confirming it.

it from injury) is concealed under stuffed rezáis, so that the place altogether presented but a mean and shabby appearance; though of course I expressed with uplifted hands and eyes all the admiration I was expected to feel.

A Persian historian quoted by COLEBROOKE tells us that many bohras were converted in the orthodox tenets by the first Musalman king of *Guzerát* in 1391: but the "Arguments" of the traditionists, (we may guess their nature) doubtless prevailed only so long as they had the power of enforcing them; for I am assured, that there is not at present a single sunní included in the sect. They appear with a few ceremonial exceptions to be strictly shíahs; and reverence the six last Imáms which distinguishes them from Ismaelís. Their burial-grounds have a pleasing appearance, the tombs being regularly arranged in streets east and west. The tombs themselves, which are of course north and south, the corpse resting on its right side, differ in no respects from those of sunnís, with the exception of a small *chirágh taklá* cut out of the north face, just like the cavity for the inscription of our own tombs. In a churchyard of this description at *Kargaon* I counted more than 1000 tombs ranged in about nine streets, some of them for children smaller than the rest, and one, covered with a singularly elegant, though perhaps tawdrily painted dome. They formerly, we are told, sent a fifth of their gains to the Sayyads of *Medina*, but a practice which imposed such a strain on the conscience could not have been expected long to obtain, among a money-loving people. Now and then perhaps a twinge of conscience, may induce the driver of a hard bargain to devote a pittance of his gains, to the holy Sayyads, but this is a voluntary, unusual, and supererogatory act of piety. Like other shíahs, they pray singly without an Imám. At their devotions they use a particular dress which consists of a *tahband*, a *chadar* thrown over their shoulders, and a small dark-colored cap, some adding to this a sort of surtout. After praying they wrap up the clothes in the *mosalla* or praying carpet. They are not so nice with respect to the cleanliness of this dress as COLEBROOKE supposed, for all that is required is that it shall be washed by their own hands after coming from the not sufficiently orthodox fingers of the *dhobí*, but it is only again changed, when become even in *their eyes*, dirty, or when it may have acquired a peculiar defilement*. So cleanly a precept as that of daily washing it, would be an exception to their general habits; for they are a very

* *Quam crepitum ventris ediderint.* They have generally two sets of this dress one of which is always kept at the mosque.

dirty people, wearing usually colored drawers, which they seldom wash, and do not change till they fall off in rags. Their houses seemed certainly neat, and a tiffin of which I partook at the mullá's was served up in the European fashion, in very clean-looking dishes, but the narrow and sometimes covered streets of their wards teem with every sort of filth. In this last respect they but copy their fellow-citizens of *Oujein*, than which I have rarely met a dirtier city : even in the dry weather mud a foot deep covers most of the streets, and disgusting sights and smells offend at every corner.

I must not omit to notice that a fine of 20 cowries (rich and poor pay equally) punishes the non-attendance of a bohra at the daily prayers. A larger sum is exacted for remissness during the Ramzán, and it is said that the dread of this small loss operates powerfully upon a class of men who are particularly penny-wise. The money collected thus is transmitted by the *Oujein* mullá to his chief at *Surat**, who devotes it to religious purposes, such as repairing or building mosques, assisting the needy of his subjects, and the like. Several other offences have the same characteristic punishment, such as fornication, drunkenness, &c. But the cunning bohras elude many of the fines, and daily indulge in practices not sanctioned by their creed ; thus in their shops pictures and figures may be purchased, though it is against the commandments to sell the likeness of any living thing. I cannot learn how the chief mullá is supported, but I am told that the heavenly passport he was supposed to furnish, is an idle fable, and every bohra to whom you speak on the subject begins to curse and to swear, and to exclaim that it is a lie.

An excellent bird's eye view of *Oujein* is obtained from the *Goga-shehid*, an isolated hill in the south-east quarter of the city. The name has its origin in one of the numerous versions of the tale of the throne of *VIKRAMÁDITYA* being discovered by *RÁJA BHOJ*. A case, which, to use the words of the Indian narrator, had made the *rāja* bite his nails, was at once decided by a shepherd boy who was playing with his companions at the game of king, seated on a mimic throne on the top of the hill. The *rāja* sent for the young lawyer who refused to stir from his judgment seat, and an armed party attempting to bring him by force, he defended himself gallantly, and at last overpowered with numbers and wounds fell lifeless on his throne of earth†. The

* The chief priests have of late years lived at *Surat*, but, their place of residence is in their own option and has been often changed.

† *HUNTER* misled by the word *Shehid* mistakes *Goga* for a Musalman saint, or perhaps he confounded him with *RAMASSEH PR'Á*, also called *GOGA PR'Á*, who was killed near *Poshkar*. See *MALCOLM'S Central India*, 2 : 177.

rāja could not repress his sorrow at the death of the wonderful child till consoled by the suggestion of the vizir, that some virtue concealed in the hill, could alone have converted an ignorant cow-boy into a sage and a hero. An excavation being accordingly made, the magic throne with its lion supporters and 32 speaking puppets was brought to light*.

Mounted on this hill and turning to the west the eye is first attracted by a staring white wall standing alone, and like some huge target actually riddled with balls. This is all that remains of the palace of the restless PĀTANGAR whose singular history is doubtless not unknown to you. He imposed the same restriction upon his son and daughter-in-law as that with which BLANCHE persecuted St. LOUIS and his queen. In strange contrast, a bulky black building appears to the right of the last, wearing that dismal look peculiar to a house which has been long unoccupied. And is it quite uninhabited then? I asked a bystander. Oh no! was his answer, it is full of jins. A Musalman lad just then came up, riding a small pony (he once rode elephants, said one of his attendants in a loud voice but *jaisa hūā taisū diya*), and begged to offer me his salām. From him I learnt that the sombre building had been the residence of the BHAO BAKSHI, the old gentleman, he assured me, might still be seen by the curious, squatted at midnight in the centre of the deserted hall, counting his money bags:—but the intruder would rue his temerity; for before he could leave the house, jins and demons would drive his senses out of him.

My new acquaintance with a justifiable pride, begged me to observe that the minarets of the mosques of A'DIL and CHAMMAN BEG, overtopped every building in the city. Even the golden *kalasa* of *Mahākāl* which glitters in the distance can hardly dispute the preeminence.

The observatory of JAY SINGH may be distinguished to the S. W. HUNTER's minute description renders a further notice unnecessary†. The wall of the great quadrant is still standing though its circles are nearly obliterated‡. Did they remain they would but be thrown away at *Oujein* which has long ceased to be the abode of science.

* I have abridged a long tale, as the same or its fellow may be found in such common books as the *Battisi Singhāsan*, &c. Most of them make *Dhār* the site of the *Singhāsan*, and the inhabitants of that city boast their hill and their tradition.

† Asiatic Researches, vol. 5.

‡ The circles in the tiled building are probably still distinct, but I unfortunately forgot their existence till I had left the place.

In answer to my inquiries for a Jyoshi, I was informed that there was not one in the city fit to speak to a sâhib*, nor could I meet with a single person who had ever even heard of the *jantra* of VIKRAMADITYA. To determine the site of this would-be curious, for it would in some measure fix the position of the ancient city, and from BABER's notice†, the observatory would seem to have been standing in his time.

Still posted on the hill and looking around the eye falls on a confused mass of buildings among which the palace of the *Scindias* and of the *Romasilar* can alone be distinguished. To the north trees confine the view, shutting out some of the most populous districts, and rendering it impossible from the coup d'œil to guess at the number of houses so as to form some estimate of the population of the city. I was furnished for that purpose with a lengthy list of the mahals, which proved equally unsatisfactory, for some of them exist only in name and others have hardly an inhabitant. The Musalman names of a large proportion shewed the bygone influence of that sect. *Oujein* seems gradually retrograding to its ancient site, most of the southern quarter of the city being deserted, owing apparently to the little elevation of the banks of the river on that side which must occasion them to be frequently overflowed in the rains. To balance this the hills of the "*Juni*" are slowly becoming covered with *Nyapuris* without end.

When JACQUEMONT was at *Oujein*, he requested three of the principal authorities who chanced to be sitting with him to write down separately what they supposed to be the population of the city. I forget the extravagant figures they guessed, but two of them who had been at *Benares*, calculated the number of the inhabitants of that city, the one at 50, the other at 20 lacs. JACQUEMONT then produced your moderate census which of course they assented to and disbelieved. One of the party the chief mullâ of the bohras, asked me if it was correct. I told him the story of the rája who challenged its accuracy

* That I was not misinformed, see Journal As. Soc. 3 : 508. I had been desirous of making inquiries regarding the very curious meteor mentioned in your Journal, 6 : 79. It may interest you to know that it was seen (and as far as I can learn at the same moment) at *Nimach* and at *Mahidpore* to the south ; at *Rajwasi*, to the northwest, (I may perhaps err here, for I have lost my note of it) ; and at *Mhow* and *Hussingabad* to the north and presented at all these places exactly the same appearance. The beautiful sketches accompanying were drawn by Lieut. KEWNEY who saw the meteor at *Hussingabad*. (We regret the impossibility of introducing these colored sketches.—ED.)

† ERSKINE'S Baber 51, the emperor seems puzzled between *Oujein* and *Dhâr*. Where is there any notice of the old observatory ?

and whom you convinced in spite of his teeth by a reference to his own establishment. Do you remember that scene? The indignation of your friend at the number of 52 assigned to his family, his boast that it contained three times 52, and the difficulty he found at last in eking out even your tale, by two old beggar women who slept at his gate? If the more enlightened *Benares* folks were so incredulous and ignorant, you could not expect much assistance in such calculations from the Goths of *Oujein*. The number of residents I would roughly estimate at 70,000. The theories which account for the change of site of *Oujein* appear to me all equally unsatisfactory—I neither believe with HUNTER that a shower of earth, nor with MALCOLM that a flood, overwhelmed the old city, nor with the natives that it was turned topsy turvy. The tales of old bricks and of wood of surprising hardness, &c. dug up at depths of fifteen feet seem to smack of the *Oujein* failing of exaggeration. Several people were interrogated who had been twenty and thirty years at the place, none of them had ever positively seen such things, though all believed most religiously both these and much more wonderful curiosities to be found. It is currently told, that a chamber was discovered in which was seated the skin of a beautiful lady, just, explained my informant, like the shape of a grasshopper which you see trembling on a stalk of grass in the dry weather. Some incautious visitor approached too near the delicate shell, it vanished into air—like the fish found in the pyramids,—“*comme de la poussière qui s’envole quand au souffle dessus.*” Bricks found at any depth would prove little, for they might have belonged to walls which stood on the slope of a hollow, filled up by time; many of the houses of the present town being built in this fashion to save the trouble of making a back wall, or they might have belonged to under ground granaries, *tahkhānehs*, or wells. A shower not exactly like the famed one of bricks and tiles*, but one equally composed of building materials, such as rained, says ASSEMANI, in 769, “*Une pluie de pierres noires,*” seems as likely to have fallen, here, as earth or sand.

The surface of the hills (of the old city) where it has not been ploughed and picked is strewed with fragments of stone, just as you would expect in a place which had once been covered with houses: these broken pieces of trap being parts of walls of which the larger companions have been taken away as material for other buildings.

The theory of an inundation is principally supported by a tradition that the river has changed its bed. This belief seems to me a native

* PLINY, where the date is gravely given.

fabrication to account for a square, tall, brick building, which resembles the wells so frequently found near the banks of the river. It is situated in a hollow through which the river is said formerly to have flowed, and which is perhaps merely the dried-up channel of some nullah. Of the name of the well *Bibi Mako* I could get no more satisfactory explanation than that the words are convenient for the repetition of the echo. Every little idle urchin runs into the square and bawls out *Bibi Mako* with a drawl on the o, and is equally frightened and delighted with the reply of *Bibi Mako*. One argument is conclusive against an inundation: that the hills on which stood the old city are higher ground than the level of the present town, and that the latter is the more likely also to be overflowed. Indeed no such extravagant theories are required to account for the desertion of the first occupied spot. The whim of the reigning prince is sufficient to determine the position of any oriental town, of which we cannot look around without observing instances, as at *Delhi*, *Lucknow*, *Maheswar*, &c. And that coins and antiques should be picked up, is not a whit more extraordinary than the annual harvest of such curiosities at *Beghram* and *Canonj*, &c. towns, the last of which at least, was gradually deserted.

Romance lovers would be shocked at my theory of the origin of the so-called *rāja BHIRTRI's* caves. The natives are in the habit of excavating the foot of the hills of the old city for an excellent clay of which there is a thick and extensive bed. Any one who has resided at *Delhi* will remember the excavations there for the same purpose, which have not unfrequently been converted into agreeable *tahkhānehs*. One of those at *Oujein* nearly rivals in extent, *BHIRTRI's* retreat, is supported by arches cut out of the clay and is divided into several chambers. Such was probably the origin of the great caves, which are very low, and not of any great extent*. They are supported by pillars, clumsy, but massive, and the walls and ceilings are lined with enormous blocks of stone calculated, it might be thought, "to fatigue time." But they will shortly be crushed by their own weight; already one room has fallen in, and some of the slabs are in such a position that at first sight it does not seem safe to walk under them. What may have been the primary object of the buildings is matter of question. The natives contend that it was *rāja BHIRTRI's* hermitage, but their own fables refute them, for we read that the *rāja* immediately after swallowing the *amar phal* set out on his travels. In no place did he allow his weary limbs long to rest, though he halted at *Sehwan* on the

* The dimensions may be seen in HUNTER.

Indus, at *Bhartewar* near *Khyroda*, at *Chunar* and *Benares*, and to this day he is believed to be still wandering about, among the *Hyperbo-reans* beyond the *Himālayas*. A late writer* imagines it to have been the dwelling place of *rāja BHIRTRI*'. There is, however, no appearance of its having been built to live in. *BHIRTRI*' would have run the risk of breaking his head or his shins, every time he rose up, or walked, in his low-roofed unevenly-floored mansion†. The pillars too are sculptured on only three sides, that side which faces the wall, and which would not be seen by one passing through the caves, not having been even smoothly chiselled.

The antiquity of the caves will be much lessened‡, if from the first they were furnished in the same fashion as the present, for they are now evidently ling temples. The figures on the pillars, are small, much defaced, and were originally far from being deeply carved, but there is no difficulty in recognizing them for those indecent groupings which mark the temple of *Shiva*. Several lings are scattered about, though one only seems to be worshipped a *Kedareswar*, 'lord of cedars.' Marks of feet engraved on the rock are not unfrequent. At the end of the left cave on a slab of black stone about three feet high and one broad, two figures (one over the other), are cut, sitting cross-legged, performing *tapasya*. The upper one is called *Gorakhnāth*, the lower, his pupil *Bhīrtī*.

Near the entrance lies a huge head of a *Rākshasa*, and the ghāt below takes its name from a gigantic stone image of *Kapila muni*, which leans against the bank half buried in sand.

The quantity of antiques collected amongst the ruins of Indian cities has always seemed to me a subject of wonder. The supply from the old *Oujein* is so constant and plentiful that the natives call the place by the appropriate name of *Rozgār ká sadābirt*, and it is in truth a never failing charity for the industrious poor. In the idle days of the rains the digging begins. The principal things found are glass, stone, and wooden, beads, small jewels of little value, seals, (agate and cornelian,) and a few women's ornaments; copper coins are numerous, next in number are the debased silver *Guzerāttī* ones. Pure silver rupees seem scarce, and gold mohurs are either secreted and melted when found, or they but rarely reward the searcher, for I was only able

* The author of the paper before alluded to in the E. I. United Service Journ.

† The caves seem by their position to be exposed to inundation which alone would have unfitted them for houses, and may have been the cause of their having been so solidly built. An outer court, though very strongly constructed has been partly thrown down apparently by the swell of the river.

‡ That is, according to COLEBROOKE's theory, which however seems to have now but few followers.

to procure one and that a doubtful specimen. As the pilgrims carry away with them, as relics, what has been dug out of the *Juni-garh*, the merchants mix with the real antiques every old bead or piece of copper which has an ancient look, and pass them off as genuine on the unsuspicious natives. One man brought me a large heap of copper seals or plates of chaprâsses which had engraved on them modern Musalman and Mahratta names, and was ready to take his oath that they had been dug up, which perhaps they were, for he had probably buried them that they might have the appearance at least of age. Steatite "*Naddûkis*" are also frequently brought for sale, some of them as old-looking as if they had really been buried with the city. I send you one as a specimen.

Sometimes the owner of an antique cannot be induced to part with it. I was told of a baniah who had a fine elephant coin, but to my request that he would sell it me at any price, he urged that ever since it had been in his possession, he had been invariably lucky. At length he consented to let me look at his treasure,—it was a bright new fanam!

The difficulty of making a collection of coins in *Mâlwa* is very much increased by the infinite variety of the currency. Every petty town has or had its separate mint, and the larger ones occasionally alter their type, so that when the impression has worn away, it is difficult to tell whether your specimen is an antique, or has been struck at a place a few miles from you. The bankers can give no assistance, they only look to the value of the piece, and care not for its author.

Even when we have secured a coin of whose antiquity we are assured, it affords but little of that satisfaction which rewards Mr. Masson's* labours. The surface of every silver *Saurashtra* coin I have procured has scaled off, leaving little of the impression perceptible; and out of several hundred of the pyce (I have called them), there is not a single specimen in which the letters, which seem to have been round the edges, are not worn away and illegible. In introducing to you my poor collection of antiques, I will commence on the approved principle of "at the beginning setting forth the best wine."

An intelligent munshi, who jealous of KERA'MAT ALI's fame has become an eager antiquary, informed me one morning that he had

* I had drawn up a few notes upon that gentlemen's collection, but my paper has so swelled "Eundo" that I must defer them to another opportunity. Let me however assist him out of one trifling difficulty. In the second memoir he is perplexed by the differences of the amount, and modern calculations of distance in *Afghanistan*. But the measurements seem in fact the same, for the Roman geographers in writing of Asia always make the distance too great from dividing the stages of the Grecian authors they copied, by eight instead of $9\frac{1}{2}$, when reducing them into Roman miles: either RENNEL or DENVILLE discovered this.

procured a *Soleymani* with characters so well engraved on it, as to remind him of the writing of YAQUB REKUM KHAN ; a *Delhi* worthy, such a master of his pen, that a beggar asking alms of him, he wrote one letter on a slip of paper and threw it to the fortunate fellow, who gained a livelihood by shewing it. The munshi's treasure, which with much pomp and circumstance he unfolded from as many wrappers as bind his Koran, was the enclosed agate. I can make nothing of the character, though it bears some resemblance to the *Guzerati Nagari*. When deciphered it will I fear give little or no information as the letters can hardly form more than one word, which will doubtless prove to be of some unknown.

[This seal was lithographed in Plate XXXVI. see page 680, where it is read as *Sri Vati khuddasya*. Mr. B. ELLIOT of *Patna*, has one similar to it in type but much smaller, which bears the legend *Sri Yokachhavyasya*, the seal of YOKACHHAVAS, a name equally strange and un-Indian. Some of the insulated names on the *Allahabad* pillar are in the same style: but this is not the place to treat of them, as it is indispensable to have facsimiles before the eye while describing them. For the same reason we withhold (under permission) the author's notes on the several classes of coins collected by himself at *Oujein* and in its neighbourhood, of which he has most liberally favored us with many very curious and well preserved specimens. We hope soon to be able to engrave this series, which is rich in varieties. The name should embrace those coins having on one side four circles, single or double, connected by a cross, of which examples have already appeared amongst Colonel STACY's Buddhist specimens. *Oujein* is also rich in what we have called the *Saurashtra* series, and still more so as might be expected, in the *gadia paisa* attributed to VIKRAMADITYA. We conclude Lieutenant CONOLLY's journal with his description of an image visited on his return from *Oujein*.—ED.]

My pandit was so lavish in his praises of an image of CHAMUNDA at *Dewass* that on my way back to the cantonments I made a detour to visit it. A fatiguing walk up a hill some 400 feet high brought me to the boasted faue. The image a gigantic figure, cut out of the solid rock which slants inwards, forming a natural temple, is perfectly adapted to the native taste, being as fine as colors and tinsel can make it. A large daub of red and yellow paint is intended to represent a red canopy, sprinkled with silver spangles and bordered with gold and silver flowers. The face is red, the pajamas are red with gold spangles. The bodice and the huge earrings mimic gold, and rings of real brass hang from the cheeks and nose, the latter proving the image to be modern*. The upper right hand holds a flaming sword over her head, in the position called "forward." The trisul in her lower right hand is inverted, to strike the wretched *daitya* from whom

* According to ERSKINE, in his paper on *Elephanta* in the Bombay Transactions.

she borrows her name, who looks as pale, as silver tinsel can make him. One of her left hands grasps a club (*gadā*), the other a yellow rapper. Her *vahan* is a goose, *rara avis*, red turned up with white. A tiger lies crouched at her feet. This idol is much esteemed. The *rājas* of *Dewass* pay it regular visits, ground is set apart for its support, and for 30 miles round; every poor woman who hopes to be called "mother" pays her devotion at the shrine, and fixes a cow-dung *swastica*, on the rock. As you descend the hill, the capital of the great state of *Dewass*, a city of huts, delights the eye; no tree obscures the view; could *SADI* have seen it, with its two *rājas*, two courts, two palaces and two *saddars*, he would have retracted his stanza of the "*Do Dervaish*." "Quid si vidisset Democritus?"

III.—Account of the Tooth relic of Ceylon, supposed to be alluded to in the opening passage of the Feroz lāt inscription. By the Hon'ble GEORGE TURNOUR, Esq. Ceylon Civil Service.


Mr. PRINSEP has, doubtless, already explained to the Asiatic Society, the circumstances under which he has been enabled to render another important service to the cause of oriental research, by the discovery of the alphabet in which the inscriptions engraven on the column at *Delhi*, *Allahabad*, *Patna* and *Bettiah* (all precisely of the same tenor and in the same character); as well as the inscriptions found on various other monuments of antiquity scattered over different parts of India, are recorded. When, on the one hand, the multiplicity of these ancient monuments, still extant in *Asia*, is considered; and on the other, it is found that the age in which, and the object for which, these inscriptions were engraven, have been shrouded under an impenetrable veil, for centuries past, some idea may be formed, even by those who have not devoted themselves to investigations of this nature, of the possible extent of the application of this discovery; and the consequent value of the service rendered. In the department more especially of numismatics, in which Mr. PRINSEP's researches have been so eminently successful, he has already shown in the May Journal of the Asiatic Society, the only number published since his discovery, the important results to which that discovery is destined to lead, in that branch also of Asiatic investigation.

Finding that the alphabet thus deciphered bore a close affinity to that in which some of the ancient inscriptions in *Ceylon* are inscribed; and at once perceiving that the language in which the hitherto undeciphered inscriptions on the columns above mentioned were composed was the *Māgadhi* or *Pālī*, Mr. PRINSEP lost no time in imparting his discovery to me; coupled with the request that I would furnish him

with a translation of the inscriptions on the *Delhi lût* ; facsimiles of which are published in vol. VII. of the Asiatic Researches.

These facsimiles are, for the most part, executed with so much fidelity; and in the few instances in which one letter has been mistaken for another, and symbols have been misapplied or omitted, the inaccuracies are so readily corrected, by conformity either to the grammatical construction of the language, or to the obvious signification of each passage; that the task assigned to me has been as facile, as the interest kept up to the last moment, in the expectation that some specific date, or historical data, would ultimately be developed, was intensely engrossing.

The only faulty fraction of these four inscriptions (each facing one of the cardinal points of the compass) in regard to the revision, of which I entertain any serious doubt, is the first moiety of the third line in the inscription fronting the north; and it so happens that it is precisely those three words which embody the explanation of the main object had in view in recording these inscriptions.

To these all-important words in the identical letters in which they are represented in the facsimile, I am not able to attach any signification, commensurate, or in keeping with designs of sufficient magnitude to have led to the erection of columns, such as these, at places so celebrated, and so remote from each other, as *Delhi, Allahabad, Patna* and *Bettiah*. Those three words as exhibited in the facsimile are  If, however, on re-ex-

amination of the columns it should be found that the correct reading is

[illegible]

and the correction, it will be seen, only involves the variation of a few minute symbols, easily misread in an ancient inscription, and the substitution of the letter \perp for \cup which also might be allowably confounded in the transcript, it will scarcely be possible to exaggerate the importance of the results produced, in reference to the interesting historical information which these inscriptions would, in that case, develop. Besides enabling us to fix the date of the record, and to identify the recording emperor, it will satisfactorily confirm the authenticity of certain Buddhistical historical annals of the close of the third century of our era, professing to be *contemporaneous with the signal events they record, the most prominent of which is the conversion of the Rājadhirāja, or emperor of all India of that age to Buddhism.*

It would be an idle waste of time to adduce the various hypothetical considerations which crowd around this investigation, tend-

ing to establish the identity of the events contained in these inscriptions, with those illustrated in the Buddhistical annals to which I allude. Had these monuments become defaced and illegible since the facsimiles were copied, with all my aversion to hypothesis and conjecture, I should have felt little hesitation in advocating that identity. But "*littera scripta manet*" and the question admits, therefore, of final and unimpeachable decision, by the simple process of a re-examination of these ancient monuments*.

In the sanguine expectation, however, of my reading still proving correct; and as the notes taken by me in the course of my investigation of this interesting passage of Indian history, would form an article in itself, not devoid of interest, independent of its connection with the inscriptions, I shall proceed to its explanation, reserving my remarks on the inscriptions to the last.

In *Pāli* annals, among the various terms by which the TOOTH RELIC of BUDDHO is designated, "*Dasanan*" and "*Dāṭhādhdū*" are those the most frequently used. The particular TOOTH RELIC, now in question, was brought to *Ceylon* in the 9th year of the reign of the monarch SIRIME'GHAWANNO, whose reign extended from A. D. 302 to 330, in the charge of HE'MÁMÁLÁ, the daughter of GU'HASI'WORAJA of *Kúlinga*, whose capital was *Dantapura*, and of her husband DANTA-KUMÁRO, a prince of the *Ujjéri* royal family. From these personages, the previous history of the RELIC is stated to have been obtained, at the time of their arrival; and the *Daladāwansa* was composed in the *kāwi* form in *Elu*, which is the ancient classical version of Singhalese.

While there is no circumstance discernible, as far at least as my investigation has extended, of external or internal evidence, which creates the slightest doubt as to this *Elu* work, called the *Daladāwansa*, having been compiled in the manner above mentioned, about the year A. D. 310, there is positive proof of its being extant, at least between A. D. 459 and 477. For MAHÁNÁMO the author of the first part of the *Mahāwanso*, who flourished in that interval, in giving the history of SIRIME'GHAWANNO's reign, in the portion of his work denominated the *Chūlawanso*, thus expresses himself in regard to the arrival of this RELIC in *Ceylon*.

* We leave this assumption for argument's sake, but the original reading cannot possibly be so changed; we have now before us an impression of the passage from the *Allahabad* pillar, which entirely confirms it as *Hidatapálaté Dusampaṭṭipādayé*: see note at the end.—ED.

"*Nawamé tassa wassamhi dāṭhādhātummaheśīno
brāhmaṇikācchi ādāya Kālingamahā idhānayaī.*

* *Dāṭhādhātussawansamhi wuttēna widhinā: sataṇ
gaheṭṭwā bahumānēna kaṭṭwā sammānamuttumaṇ,
Pakkhipiṭṭwā karaṇḍamhi wisuddhaphalikumbhawē,
Dēwānaṇṇapiyatissēna rājawuttumhi kāritē,
Dhammachakkawahayē gēhē waḍḍhayittha mahipati:
tato paṭṭhāya taṇ gēhaṇ Dāṭhādhātuggharaṇ ahu."*

"In the ninth year of his (SIRIME'GHAWANNO's) reign, a certain brāhmaṇ princess brought the *Dāṭhādhātu* or TOOTH RELIC of BUDDHO, hither, from *Kālinga*, under the circumstances set forth in the *Dāṭhādhākawanso*. The monarch receiving charge of it himself, and rendering thereto, in the most reverential manner, the highest honours, deposited it in a casket of great purity made of "phalika" stone, and lodged it in the edifice called the *Dhammachakko*, built by DEWANANPIYATISSO."

This *Daladāwansa* compiled in the ancient *Elu* was translated into *Pāli* verse, during the first of the three short-lived reigns of the queen of *Ceylon*, named LILĀWATĪ, who is as celebrated in the history of the island, for the vicissitudes of her career, as for being the widow of PARĀKKAMO the first, the most martial and enterprising of all the monarches of *Ceylon*, subsequent at least to the *Wijayan* dynasty.

The translator of this work WAS DHAMMARAKKHITO théro, and the period embraced in LILĀWATĪ's first reign is from A. D. 1196 to A. D. 1200; at the termination of which, she was deposed, for the first time by SĀHASAMALLA.

The translator thus prefaces his translation of the *Pāli* work; to the analysis of which I shall presently apply myself.

"As the compilers of the *Chulawanso*†, in noticing the arrival of the TOOTH RELIC (in *Ceylon*) have in a single *gāthā* only referred to the *Daladāwansa* which had been composed in *Elu* verse, and stated that for the rest of the particulars connected with the TOOTH RELIC, the *Daladāwansa* must be consulted: as that *Elu Daladāwansa* is of inconvenient magnitude, comprising the details contained in the *Parinibbāna suttān* (of the *Piṭakattayan*) and the account of the transmission of the TOOTH RELIC to *Kālinga*: as in those texts it is found that at the demise of BUDDHO the théro KHE'MO conveyed the TOOTH RELIC to *Kālinga*: as that *Daladāwansa* is both inconvenient in size, and from its being composed in the obsolete *Elu* dialect, its meaning is most difficult of comprehension to the Singhalese people: as the benefit resulting both in this world and in the next, from listening to it, appears to be thereby prejudiced; as both to the inhabitants of this island and of other lands on its

* "*Daladāwansa*" the *Elu* denomination of the work would necessarily in the *Pāli* be converted into "*Dāṭhādhātūwanso*."

† The passage above quoted.

being transposed into the *Mágadhi*, and on its being comprehended in that delightful language, all the benefits derivable in this world and in the next would be most fully realized,—therefore transposing the substance of the *Daladāwansa* composed in *Elú káwi* into *Mágadhi* verse, according to the prosody of that language, this *Dáthádhátuwanso* is composed in a form comprehensible to degenerated intellects.”

A few leaves further on, DHAMMARAKKHITO explains that it is under the auspices of the minister, also called PARA’KKAMO, by whom LI’LA’WATI’ was raised to the throne, that the translation was undertaken by him ; and towards the close of the book, he gives his own name, to which the title of “*Rájaguru*” or “preceptor of royalty” is added.

In the following analysis of the *Dáthádhátuwanso*, I will endeavour to make my abridgements as concise, and my extracts as few, as a narrative exposition of its contents will admit of.

After the funeral obsequies of BUDDHO had been performed at *Kusinárá* (in the year 543 B. C.) one of his disciples KHE’MO théro is commissioned to take his *LEFT CANINE TOOTH to *Dantapura*, the capital of *Kálinga*. The reigning sovereign there, who received the RELIC, was BRAHMADATTO. He was succeeded by his son, KA’si, who was succeeded by his son SUNANDO. These rajas are stated to have been devout Buddhists. From the indiscriminating tone in which the ensuing monarchs are stated to have “continued to make offerings to the TOOTH RELIC of the divine sage” it is reasonable to infer that, subsequently to SUNANDO’s reign, Buddhism ceased to be the faith of the rulers of *Kálinga*. At all events GU’HASI’WO, who as a contemporary of the Ceylonese monarch MAHASE’NO, must have reigned, towards the close of the third century of our era, is admitted to have been of the bráhmínical faith. Up to that period, therefore, the RELIC had been kept at *Dantapura* for a term of, at least, 800 years.

The circumstance of a splendid festival having been held in his capital, in honor of the RELIC, by the inhabitants of *Kálinga*, leads GU’HASI’WO into a controversial discussion with the Buddhist priests in that city, which terminates in that rája becoming a convert. With all the zeal and intolerance of recent conversion, he expels from his dominions, the ministers of the bráhmínical faith, who are thenceforth called *Nighañtá*. These discarded bráhmans repair to *Páñlipura*, to appeal to the RA’JA’DHIRA’JA’ of all *Jambúdp*, who is called PA’NDU, whether that be his individual name, or the designation of the dynasty from which he is descended, remains to be decided. The burden of their representation is that “while PA’NDU, emperor of all India, worships the deity worthily adored by all the *déwas*, GU’HASI’WO, a rája subordinate to his authority, reviling those gods, worships a piece of human bone.”

PA’NDU commissions CHITTAYA’NO, another subordinate rája, it is not stated of what country, to chastise GU’HASI’WO. The commands issued are sufficiently

* I take this opportunity of correcting a note made at page 105 of my translation of the *Maháwanso*. The TOOTH RELIC there spoken of is the *right* one. I had forgot at the moment the RELIC removed from *Dantapura* to *Ceylon*, was the *LEFT TOOTH*.

precise and concise : "repairing to the *Kālinga* country, bring hither GU'HASI'wo and the piece of human bone, which he worships day and night." CHITTAYA'NO proceeds, with a great army, to *Dantapura*, and besieges the town. GU'HASI'wo at once makes his submission, presents CHITTAYA'NO with elephants and other tribute, and receives him with his army, into the capital. Within the palace of GU'HASI'wo, CHITTAYA'NO, delivers the commands of the emperor, which the *rāja* of *Kālinga* receives with "feigned satisfaction." Here GU'HASI'wo enters into the history of the RELIC, as explanatory of the grounds of his conversion, as well as of his adherence to Buddhism. His relation makes a favorable impression on CHITTAYA'NO and his officers, and they proceed, from the palace to visit the RELIC temple, the splendor of which is described in glowing terms. There GU'HASI'wo opens the RELIC casket resting on his right knee, and then, with clasped hands, makes an invocation to the RELIC, rehearsing the miracles formerly performed by it, and imploring that they may be then repeated. Those miracles take place accordingly. CHITTAYA'NO and his army become converts, and make offerings.

Here the second chapter closes, and as the third is the portion of the work which furnishes, as I conceive, the evidence of the identity of PĀNDU with the monarch by whom these inscriptions were engraved, I shall furnish a literal translation of those parts of the chapter which are applicable to the subject of the present inquiry.

CHAPTER THIRD.

"CHITTAYA'NO nevertheless signified to the king of *Kālinga*, that the command of the emperor PA'NDU was inviolable. Thereupon the *rāja* GU'HASI'wo, decorating *Dantapura*, with banners and flowers, (perfuming the streets) with incense, and intercepting the rays of the sun with a canopy of cloth, surrounded by his subjects both of the capital and from the country, with their eyes streaming with tears, raising on his own head the precious RELIC CASKET, and ascending a chariot, resplendent as the rising sun, and lined with costly variegated cloth, over which was spread the splendid white canopy (of dominion), and to which were harnessed horses, white as the cavity of shanks (shells); and followed both by an innumerable concourse of people, rolling on, like the waves of the ocean, and by the aspirations of the multitudes who remained behind at the capital, ranged himself on the high road to *Pātītipura*, which was every where, in its full length and breadth, carefully strewed with white sand, lined with filled vases (of bouquets), and festooned with (garlands of) flowers. On the journey, this protector of *Kālinga*, together with the tutelar deities of the wilderness (through which he was travelling) made daily offerings to the TOOTH RELIC of flowers, amidst dances and vocal and instrumental music. The protector of his people (GU'HASI'wo) escorting thus the TOOTH RELIC, and in due course achieving his arduous journey, across rivers and mountains, reached the city named *Pātītipura*.

"When the king of kings (PA'NDU), in the midst of his court, perceived that this *rāja* of *Kālinga* was unawed by fear, and perfectly composed, furious with rage, he thus addressed the *Nighanḍa* who had maliciously informed (against GU'HASI'wo). 'This instant, committing to flames rising out of burning char-

coal, consume at once this piece of human bone, which this fellow worships, forsaking the gods worthy of adoration.' The delighted *Nighantá* then formed in the palace yard itself a deep and broad charcoal furnace, calculated to retain heat, by suppressing the rising flame. These *Titthiyá*, blinded by ignorance, then cast into this charcoal furnace, blazing and flaming all round like the appalling *Rárawo* hell, the TOOTH RELIC. By its (the relic's) miraculous power, an enchanting flower, emerging from the flames, in the form of a lotus, but of the size of a chariot wheel, adorned with erect petals and capillary pistils, rose aloft. Instantly, the TOOTH RELIC of the vanquisher (BUDDHO) alighting on the top of that flower, manifested itself by shedding its light all around, like unto the dazzling white jessamine. The multitude, witnessing this miracle, delighted, and making offerings of gold and other treasures, to the TOOTH RELIC of the vanquisher, each abjured his former creed.

"PA'NDU rája, unwilling to renounce the faith he had long professed, causing the TOOTH RELIC to be placed on an anvil (commanded) that it be crushed with a hammer. It (the RELIC however) sank into (became imbedded in) the anvil, and manifesting only the half of itself, shed its light all around, like unto the rays of the sun while rising behind the mountain of the morn.

"The supreme monarch, on witnessing this miraculous power of the TOOTH RELIC of the vanquisher, became bewildered with astonishment. Thereupon, a certain *Nighantá*, impelled solely by envy, made this remark to the rája: 'Déwo! the *Awatárá* of WISHNO in the character of RA'MA' and other forms has already taken place: if this human bone be not a part of his body, whence these miraculous powers? Most assuredly this is a portion of the body of that deity who was incarnated in the human form and who, after death, passed to heaven and it was bequeathed (by him) for the spiritual welfare (of the world). This fact is undeniable!' The rája thus replied to this prating *Nighanto*. 'Rendering then, all adoration to the merits of that *Náráyano* (WISHNO) gifted with supernatural powers and extracting, while I am looking on this (RELIC) which is imbedded in this anvil; and making the countenances of the multitudes who are spectators joyous as gay flowers, derive from it all the advantages ye can desire.' The *Titthiyá* imposters, chaunting forth the praises, in every possible form, of WISHNO, sprinkled it (the RELIC) with their (holy) water. The RELIC however did not move from the position in which it was fixed.

"Thereupon the protector of the land (PA'NDU) reviling the *Nighantá*, and seeking to discover a means of extracting the RELIC from the anvil, proclaimed by beat of drums through his capital: 'Whoever can extract this instant, the TOOTH RELIC, which is imbedded here in this anvil, obtaining from the rája a great reward, he will ensure his own happiness.' Therefore a certain *Setthi* named SUBADDHO, a benevolent character, a believer in the power of BUDDHO, and a wise man, resident in that city, hearing this great beating of drums, repaired to the court of the rája. This individual, though agitated with fear, bowing down to the supreme monarch, explained in the presence of the officers in the court, in persuasive language, the merits and miracles of the OMNISCIENT (BUDDHO)."

SUBADDHO then proceeds to relate the acts of BUDDHO in his former incarnations. His resignation, in the form of the *Chadanta* elephant, of his tusks to the

wild hunter SO'NUTTARO. He committed himself, when incarnated in the form of a hare, to the fire, to supply roasted meat to INDRA, disguised in the character of a famished bráhmán. His sacrificing his eyes in the character of the rája Si'wo, as an offering to INDRA, who came disguised as a blind bráhmán. His forbearance in the character of *Ksantawáddi*, a devotee, towards KALA'bo the rája of KA'SI, who lopt off his arms and legs; and other pious deeds of BUDDHO in his former existences.

(Translation resumed.)

“ ‘ By the truth of these declarations may the TOOTH RELIC of the vanquisher instantly rising aloft into the air, effulgent as the halo of the sun, dispel the doubt that exists in the mind of the people.’ Instantly, the TOOTH RELIC of the vanquisher, rising aloft into the air, like the silvery planet (the moon) shed its effulgence all around. Then descending from its aerial altar, and alighting on the head of the said *Setthi* rejoiced him, as the sincere votary bent in prayer (rejoices) who is sprinkled with sacred water. The *Nighantá*, seeing this miracle, thus addressed PA'NDU the ruler of men. ‘ *Déwo* ! this is the supernatural *wijjá* power of this *Setthi*; it is not the miraculous power of the TOOTH RELIC.’ The monarch, on hearing this remark of theirs, thus spoke to the *Setthi*, SUBADDHO: ‘ If there be any act which would convince these, have recourse, accordingly, to that miracle.’ Thereupon, SUBADDHO the *Setthi*, calling to his recollection the miracles performed by the supreme MUNI (BUDDHO) deposited the TOOTH RELIC in a golden vessel, filled with scented and delightfully cool water. It rapidly ran round the golden vase, in the scented water, revolving to the right hand, and like unto the king of *Swans*, rising to the surface and diving to the bottom, and making the spectators’ eyes stream with tears of joy.

“ He (the king) then had a hole dug in the middle of the street, and casting the TOOTH RELIC therein, and having it thoroughly filled up with earth, trampled it down by means of many tusked elephants. A flower of the marsh (the lotus) in size a chariot wheel, the leaves of the flower glittering like a jewel, and dazzling with its silvery pistils, and with petals as if of gold, arose. On this cluster of pistils, agitated by a gentle breeze, the RELIC of the vanquisher, casting its effulgence all round, alighted; and continued manifest for a short while. Thereupon the people surrendered their garments and jewels as offerings: a shower of flowers descended: with shouts of exultation, and chaunts of gratitude (the people) made the capital ring.

“ These *Titthiyá*, then persuading the RA'JA'DHIRA'JA', that this miracle was an imposture, threw the RELIC into a sewer, into which the filth of the town was collected. It (the sewer) was instantly invested with the five descriptions of (aquatic) flowers, which are the food of the swan tribe, and buzzing with the hum of the honey bees, became like the delightful pond in the *Nandá* heavens. The state elephants roared: horses neighed: men set up shouts of joy: drums and other musical instruments rang, each with its peculiar note: the diffident and modest even, who abstain from the dance and song, exulted and reeled, and intoxicated with joy, waved cloths over their heads: the sky was overcast with the smoke rising from incense as if it were a cloud: and from the number of flags that floated (in the air) the city appeared formed of flags themselves!

“ On witnessing this miracle, the magnitude of which is inconceivable, the converted portion of the ministers or nobles, forming the resolution to recognize

the true faith, approaching PA'NDU, the ruler of men, thus addressed him : ' Rāja ! if a person having witnessed such a manifestation of the divine power of the supreme MUNI as this is, experience not the slightest joy, can he be endowed with wisdom ? Rāja ! rejoicing under circumstances worthily productive of joy, is as inherent in the nature of a good man, as is the voluntary expansion of the whole tribe of the night-blowing flowers when the moon rises. Rāja ! forsake not the path that leads to heaven, by (following) the doctrines of these ignorant persons. What man, not an idiot, who is on his travels, would seek his way, employing a blind man for his guide ! The illustrious sovereigns, KAPPINO, BIMBISA'RO, SUDDHO'DA'NO' and other rāja's (the contemporaries of BUDDHO) believing in the salvation of that rāja of *dhañmo*, with sincerity of faith, drank of *dhañmo*, as if it were the nectar of the gods. The thousand-eyed and long-lived chief of the *dévos* (INDRA), having had recourse to the lord of MUNIS, who had overcome mortality (regeneration by transmigration), and heard his pure *dhañmo*, attaining the blessing of *dhañmo* (the *sówan* sanctification) secured his protracted existency (of three kotis and sixty lacs of years). Ruler of men ! do thou also, in order that thou mayst follow the path that leads to heaven, and eternal emancipation, quickly incline thy heart towards the supreme ruler of *dhañmo*, the vanquisher of the five deaths, and the *déwo* of *dévos* !'

" The monarch having listened to this declaration, and his disbelief in the *three treasures* (Buddhism) being overcome, in sincerity of faith, thus addressed himself, in the midst of his court, to the minister who was his spiritual counsellor : ' I who have disbelieved the merits of the *three treasures*, which are the means of salvation from *Saṃsāra* (eternal transmigration) have long professed an heretical faith ; and although in the full exercise of my imperial authority, I have been deceiving myself (with vain glory), I have been shivering with cold, while I appeared to be a blazing meteor ; and in the blindness of my ignorance, I have been blowing at a firefly (to produce heat) : while I have been agonized with thirst, forsaking the flowing river, I have been seeking, with procrastination, the deceptive waters of a mirage. I who have longed for a protracted existence, rejecting the aliment of life, have subsisted on the subtlest poison ; and throwing aside a garland of *sapu* flowers, have borne on my shoulders a coil of serpents. Forthwith repairing to the sewer and invoking it (the RELIC) bring forth the RELIC of the vanquisher : I will perform the acts of piety, which ensure universal, spiritual happiness.'

" Thereupon this spiritual counsellor of the king, who was the prime minister, in the fulness of his joy, repaired to the sewer ; and bowing down to the RELIC of the supreme MUNI, thus invoked it. ' The ruler of men, renouncing the heretical creed he long professed, places implicit faith in SUGATO' (the deity of felicitous advent) ; do thou, therefore, repairing to the palace of this monarch, increase his joy in the *three treasures*.'

" Instantly, it (the sewer) assumed the form of a pond like the lake *Mandā-kini* (in the Himalayan country) resplendent with full-blown flowers of golden hue. Thereupon, the RELIC of the chief of MUNIS, like a swan, sailing from one blown flower to another, glittering like the rays of the white jessamine, made th^c

whole city appear as if immersed in an ocean of milk. Then transferring itself to the palms of both hands of the prime minister, which were as red as a flower and rendering itself manifest to the great concourse assembled, made him an instrument of conferring signal benefit on the people. The ruler of men, on hearing of this (further) miracle performed by the RELIC, in the impatience of his joy, hastening thither on foot, and manifesting his two-fold delight, in sincerity of faith, with clasped hands, thus prayed (addressing himself to the RELIC) 'Universal intelligence! practised traffickers assign a value to gold after having tried it on a touchstone: this has been a practice from days of yore. Worldly persons, on finding a gem of a rich mine, perfecting it by passing it through fire, for the purpose of exhibiting it, set it in the crown of royalty. Supreme MUNI! in the present instance, it was for the purpose of putting thy (divine) attributes to the test, that all this has been done by me. Infinite wisdom, pardon this act of great presumption on my part; and instantly adorn the crown of my head.' Thereupon the TOOTH RELIC, resplendent in the form of a jewel alighting on his head, shed around a white halo, like unto milk spirting from mothers under the impulse of affection for their offspring. This bearer of the RELIC (PA'NDU) then walking in procession round the capital, making offerings of flowers, incense, &c., conveyed it within his palace, which had been previously decorated for the occasion. The rāja then deposited it on the imperial golden throne, over which hung the great white banner (of dominion.)

"This monarch, for the rest of his existence, taking refuge in the *three treasures* of which BUDDHO is the first, (viz. BUDDHO, DHANMO and SANGHO;) and forsaking his former cruelties towards the animal creation, and becoming the fount itself of compassion, was thoroughly imbued with benevolence towards all mankind."

The third chapter then concludes with stating that PA'NDU built a splendid temple for the RELIC, and dedicated his dominions to it, as ASOKO had done before him to the Bo-TREE at *Buddhagaya*, an account of which is given in the 18th chapter of the *Mahāwanso*, that he conferred great presents and honors on GU'HASI'WO; and discarding the heretics, zealously supported Buddhism.

The fourth chapter opens with an account of an attack made on *Pātītipura*, by a rājé named KHI'RA'DHA'RO, on account of the RELIC. Buddhists in *Ceylon* have been taught to understand that KHI'RA'DHA'RO was a Buddhist, and sought the acquisition of the RELIC, out of devotional feelings. I can, however, find no authority for this view of his motives, nor for assigning *Sāwattipura** to be his capital, which would in that case make him the sovereign of *Kósala (Oude)*. PA'NDU leaves his capital, with a great army, to meet him in the field. KHI'RA'DHA'RO is defeated, and, as will be seen afterwards, is killed in this campaign. The *Dāthādhātūwanso* then proceeds with the following account of the termination of PA'NDU's regal career.

* In Captain FORBES' account also, of the TOOTH RELIC, published in the *Ceylon Almanac* for 1835, *Sāwattipura* is stated to be the capital of KHI'RA'DHA'RO's dominions.

"Thereafter the chief of rulers (PA'NDU) having secured the prosperity of his realm, resigning the cares of dominion to his illustrious son, and restoring the TOOTH RELIC of SUGATO to, and conferring great favors on, GU'HASI'WO, permitted him to return to his own dominions (*Kálinga*). The protector of the world, by the distribution of riches in charity in various ways, having gladdened the distressed, and for a considerable period, led the life of piety which appertains to the sacerdotal state, (i. e. *became a Buddhistical priest*,) after corporeal dissolution (death) was transferred to the mansions in the realms of the *Dévas*, and realized the many rewards of righteousness which were the objects of his aspirations."

To save space I revert to an abstract of the remainder of this chapter. The RELIC is restored to *Dantapura*: a young prince of *Ujjeni* visits that city on a pilgrimage to the RELIC: he thence acquires the name of DANTAKUMA'RO, and GU'HASI'WO bestows his daughter (HE'MA'MA'LA) with a rich dowry, on him in marriage, and appoints him the custos of the RELIC*.

The nephews of KHI'RA'DHA'RO, who had led a wandering life, from the time their uncle had fallen in battle, came, with a great force, to attack *Dantapura* for the purpose of getting possession of the RELIC. They fortified themselves in its vicinity, and called upon GU'HASI'WO either to surrender the RELIC, or give them battle. "The ruler, on receiving this demand, instantly made this confidential communication to the prince (DANTAKUMA'RO). 'As long as there is life in my body, I will not surrender the TOOTH RELIC to another. Should I not be able to vanquish them, assuming the disguise of a bráhmaṇ, and taking possession of the TOOTH RELIC worthily adored by *Dévas* and men, fly to the *Sthala (Ceylon)*.' Having received this important injunction from his father-in-law, DANTAKUMA'RO inquires who would receive and befriend him in *Ceylon*. The king explains that it is a Buddhistical country, blessed with pious priests, and that the reigning sovereign MAHA'SE'NO had sent offerings to the RELIC, and even solicited for a little of the holy water in which the RELIC had been bathed."

GU'HASI'WO then sallies forth with his army, and is killed in battle, by the nephews of KHI'RA'DHA'RO. DANTAKUMA'RO assuming the preconceived disguise of a bráhmaṇ, escapes out of the town with the RELIC, and "proceeding to the southward crossed a great river, and buried the RELIC in a sandbank of that river." Returning to the city in his disguise, he brought away his spouse, also in the garb of a female bráhmaṇ, and resuming possession of the RELIC remained in a wilderness. After many miraculous adventures, and in particular, meeting an inspired théro, who gives them advice and spiritual courage, the royal pair reached the port of *Tálamitá* and found there "a vessel bound for *Ceylon*, firmly constructed with planks sewed together with ropes, having a well-rigged, lofty, mast, with a spacious sail, and commanded by a skilful navigator, on the point

* An office kept up to this day, and called in *Singhalese* "*Diyawadana nilame*" which literally signifies "the water-bearing-chief," from the duty he had to perform in the temple, till it was assigned to priests, who now perform that ceremony at the daily services that are celebrated there.

of departure. Thereupon the two illustrious bráhmans (in disguise) in their anxiety to reach *Sihala*, expeditiously made off to the vessel (in a canoe) and explained their wishes to the commander. He, influenced by their persuasive entreaty, and conciliating demeanour, readily had them hoisted on board." The RELIC is, all this while, concealed in the hair of the princess. A great storm is encountered the first night. During the voyage the rajas make offerings, one festival lasts ten days.

The fifth chapter describes the landing of the RELIC in *Ceylon* at the port of *Lakputanan*, a place I am not able to identify, where it is concealed in the *kóv-ila* of a *dewáli*. The disguised prince and princess are directed in their journey to *Anuradhapura*, the capital at that period, by an itinerant bráhman, and they proceeded hither in the night. There they learn for the first time, and with dismay, the death of MAHA'SE'NO, the rája whose protection they were taught to expect on their landing. They are assured, however, that the reigning monarch (SIRIME'GHAWANNO) is a rigid and a pious Buddhist; and they divulge their having brought the RELIC to a priest resident at the *Méighayiri* wiharo at *Anuradhapura*, who was reputed to be in the king's confidence. This priest receives the RELIC into his own residence, and hastens to report the event to the "pious" rájá, whom he finds, in the midst of his recreations, in the royal garden, surrounded by his "pleasure-women."

Two other sections have been subsequently added to the *Dáthádhá-tuwanso* bringing the history of the RELIC down to the middle of the last century,—into the particulars of which it would be out of place to enter here. Suffice it to say that this atom of idolatry has ever since that period been considered by the Ceylonese Buddhists to be the palladium of the country, and its possession has been deemed indispensable to perfect the title of sovereignty over the land. Between A. D. 1303 and 1314, in the reign of BHUWANEKABÁHU first, ARIYACHAKKAWATI the commander of an army sent by KULASE'KARA king of *Pandi* to invade *Ceylon*, got possession of the RELIC and transferred it to *Pandi*. To treat for its recovery the next monarch of the island PARAKKA'MO the third, proceeded to *Pandi* in person, and was successful in his mission. According to REBEIRO it was captured by CONSTANTINI DE BRAGANZA during the wars of the Portuguese in 1560, and destroyed upon that occasion. The native authorities, however represented that the RELIC was safely concealed at *Delgamoa* in *Saffragam*, during those wars. It was surrendered to the British, together with the Kandyan kingdom, in 1825; and for the tranquillity of the country it has been found necessary to keep this object of superstition strictly in its own custody.

In Dr. DAVY's history of *Ceylon* will be found a drawing of the RELIC, and an account of its abstraction from the temple, and its subsequent recapture, during the general rebellion in 1818. Should my conjectural reading of these inscriptions prove correct, it would

be a coincidence of no ordinary singularity, that by mere accident, it should have fallen to the lot of the person who has had the official custody of this RELIC since 1828 to have suggested that reading. During that period, the six-fold caskets in which it is enshrined have been twice opened, once in May, 1828, at the request of the natives, when a magnificent festival was celebrated, which lasted a fortnight; and again in 1834, to admit of Sir ROBERT and Lady HORTON seeing it, on which occasion the scientific Austrian traveller BARON VON HUGEL was also present. The keys of the sanctum are never absent from my library, excepting during the actual performance of the daily religious ceremonies, and at night a military guard is posted at the temple.

Our much valued correspondent then proceeds to his reading of the inscription, which with his permission we now withhold, with exception of the opening paragraph, which has formed the text of the foregoing paper. It is as follows :

1. *Dēwānanpiya Pōṇḍu so rājā hēwan ghā, Satta wisati*
2. *wasā abhisitēna mē iyan dhanmalipi likhapitā*
3. *hi. Dantapurato Dasanan upadāyin. Ananta agāya dhammakāmalāya.*
4. *Agāya parikhāya, agāya sāsānāya aghāya, &c.*

"The Rājā PA'NDU who is the delight of the déwos, has thus said. This inscription on *Dhanmo* is recorded by me who have attained the twenty-seventh year of my inauguration. From *Dantapura* I have obtained the tooth (relic of BUDDHO), out of innumerable and inestimable motives of devotion to *Dhanmo*, with the reverential awe, &c."

Mr. TURNOUR rests the tenability of his corrections upon the possibility of errors in the printed transcript. There is, however, no chance of these in the name of the rāja—neither is there any in the passage *hidatapālaté*, &c.—which is confirmed by *three* texts. With full anticipation that the author will himself abandon his reading when the July No. reaches *Ceylon*, we refrain from entering into defence of the reading, if not of the interpretation, we have ourselves adopted. The word *agāya* we also think is much more intelligible as *aghāya*; and *susūsaya* cannot certainly be read as *sāsānāya*. For the most part the author's translation (which extends only to the four tablets) corresponds in substance with the one published, and after having invited him to the labour, it was perhaps ungracious to anticipate it by an attempted version of our own;—but we are very sure Mr. TURNOUR will forgive an ambition so natural, and the learned world will be well pleased that our interpretation should have in all but a few passages the confirmation of so distinguished a scholar.—ED.

COPPER PLATE GRANT from MULTAYE

First Plate.

ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
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 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

Second Plate:

ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
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 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

back of ditto

ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

यत्र वेद पुराण ग्रन्थेषु ॐ नमो भगवते वासुदेवाय
 वसुदेवाय नमः ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

गुणवत्तु वा ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

back of ditto

उक्तं यद्वा ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥
 ॐ नमो भगवते वासुदेवाय ॥ ॐ नमो भगवते वासुदेवाय ॥

SEAL



M. Ommunney del.

Brinsford lith.

IV.—*Facsimiles of ancient inscriptions, lithographed by JAMES PRINSEP, Sec. As. Soc. &c. &c.*

[Continued from page 786.]

Copper-plates from Multáye, or Multái.

Plate XLIV. exhibits in facsimile an inscription on three copper-plates connected by a ring and seal in the usual manner. It was discovered by MANATON OMMANNEY, Esq. of the Civil Service, under circumstances which will be best described by an extract from his letter, transmitting the originals whence the lithographs have been made:—

“ *Baitool, 9th Oct. 1837.*

“ My long promised inscription has been delayed in the hope of elucidating its contents: but all my endeavours have been without success.

“ The plates belong to KAMALA BHARTRI, a *gosátn*, who is a pensioner of government, and who enjoys a small parcel of rent-free land at *Multáye*, as a religious grant for *pujá* at the temples built on the tank whence the *Táptí* river is said to take its rise. On my investigating the rent-free tenures two years ago the man brought them as his *sanad* and begged me to use my influence in procuring the restoration of his rent-free village of *Khar Amla* near *Multáye*, which had been resumed at the commencement of our rule in these provinces by Major McPHERSON. The plates he said were proof of right; for no one could read them, they were so old and authentic. Whatever other proof he may possess it is clear that the present *sanad* altogether disproves his pretensions. Observing in your journal for November last an illustration of the copper-plate inscription sent by Mr. McLEOD from *Seonf* I recollected this and sent for it.

“ By means of a key you furnished, and by comparison with an inscription communicated by Serjeant DEAN in a former number of your publication, I made out a part but could get no good pandit to translate what I had deciphered. I made over the key and plate to DHUNDI RÁJA SHÁSTRÍ, our *sadar ámn*, who kindly finished the task and gave me a translate in *Bhášha*.

“ There are no such names as DATTA RÁJA*, GOVINDA RÁJA, MÁSWAMIKA RÁJA†, or NANDA RÁJA, in the catalogue of *Garha Mandala* rajas. They may be descendants of BAKHT BULAND of *Deogarh Búlaghat*, but it is not probable. It appears that they were *Rahtores*

* I read this name DURGGA RA'JA.—ED.

† The *sadar ámn* reads *Máswamika rája*; but it is probable that the text should be understood as *Srimat-Swámika rája*.—ED.

(*Rashtra kuṣas*), but still they were called *Ghorowa* or *Gond**, which induces me still to think they must have reigned somewhere in these parts. The villages mentioned have not the slightest resemblance in name to any in this district, nor can I discover any at all like them at *Hoshangábád* or *Jubulpúr*.

"You will observe that the grantee in the *sanad* is a *Chaubi*, (*Chaturvedí*), and the present possessor a *gosátn*, which shews that it must have changed hands though the *gosátn* tells me it has been in his hands for forty generations,—a piece of gross exaggeration! No one could read or decipher it, and it was looked upon with great veneration and respect: indeed I could hardly induce the man to lend it to me."

My friend Mr. OMMANNEY has been very successful in deciphering these plates, there being but few places in which a careful collation with the aid of my pandit has suggested an amendment of his reading. One of the most obvious corrections is that of the name, on the seal, and in the second line of the 3rd page where the plate is much worn, viz. YUDHÁSURA in lieu of *Yudhástara*, which the *sadar ámin* apparently supposed a corruption of *Yudhishtira*. The first name also read as DATTA RÁJA should be DURGA RÁJA.

But the most material correction applies to the date, which Mr. OMMANNEY interprets as *Samvat* 1630, or A. D. 1573. The alphabetical type at once proves that this supposition is many centuries too modern, nor do I clearly see how the pandit could so far have misled his master in the translation, seeing that the text is read by Mr. OMMANNEY himself and the pandit *s'ateshu shatkēna trins'ottareshu*. The obvious meaning of this is six hundred and thirty besides,—just about the period we should have assigned to the writing on comparison with the *Gupta* and *Gujeráti* styles. But it is not at all certain that this is the correct reading, or that the era can be assumed to be that of VIKRAMÁDITYA. The precise letters in modern character are,

सक काले संवत्सरे शतेषु ढे २ त्रिंशत्तरेषु

saka kálē samvatsarē s'ateshu ? ? trins'ottarēshu.

Now in the first place, the era is here that of *Saka* or *Saliváhana*: in the next,* after the word *s'ateshu*, hundreds, in the plural number, two unknown characters follow which may be very probably numerals. The second has much resemblance to the modern ८ or

* The word supposed to be *Ghorowa* is precisely the same as that on the seal, the surname of the rája, YUDHÁSURA, the 'hero in battle,' so that the connection with the *Gond* tribes cannot be thence deduced.—ED.

eight, but the first is unknown and of a complex form : its central part reminds us of the equally enigmatical numeral in one of the *Bhilsa* inscriptions. It may perhaps designate in a cipher the word *ankē* अङ्के, 'in numerals' thus purporting 'in the year of *Saka*, hundreds, numerically 8, and thirty over.' A fertile imagination might again convert the cipher into the word अष्टके, eight, afterwards expressed in figures ; but I must leave this curious point for future elucidation, wavering between 630 and 830 for the date of the document, which in either case is of considerable antiquity and indeed one of the most ancient of such records yet brought to light containing a date.

I now subjoin Mr. OMMANNEY's transcript and translation with the modifications I have before alluded to.

On the Seal, श्रीयुष्मासुरः

First page.

खल्लि विस्तीर्ण स्थितिपालनामयश्चसि श्रीराष्ट्रकूटान्वये रम्ये
श्रीरनिधाविवेन्दुरभवत्श्री दुर्गराजोत्पः लोकाङ्गादन हेतुभिः प्रवितते
स्तेजोविःशेषोदर्यैर्यनाब्धेः पदवीं विगाह्य विधिवत्पद्मद्वयं भासितं ॥ तस्यसू
नुरासीदनेकसमरसाहसार्जितयश्चः श्रीगोविंदराजः* तस्यात्मवानात्मजः

Second page.

श्रीमाखनिकराज इत्यनुपमो यस्यार्जितं पौरुषं संग्रामादनिवर्त्ति
नेविजयिनः संगीयते सर्वतः जातस्तस्यसुतः सतां बद्धमतः श्रीनंदराजः
कृती कांतः कारुणिकः कलङ्करहितः कालः करालोद्विष्टां धौरेयो रणसाह
साहितधियामयेसरो मानिनां वैदग्ध्योद्धतचेतसामधिपतिः कल्पद्रुमो
यार्थिनां

Third page.

यश्च संश्रयविशेष लोभादिव सकलैराभिगामिकैरितरैश्च गुणैश्च
प्रेतः परमज्जाः पदमभागवतः श्रीयुद्धासुरपरनामा स सर्वानेव
राजसामंतविषयपतिग्राम भोगिकादीन समनुबोधयति विदितमस्तु

* The metre requires here an addition of 12 letters to the 9 found in the original to complete the *Sardūla vikṛita* verse. These KAMALA'KA'NTA would supply thus : श्रीरानन्द शुभाकरस्य जगतां 'the moon of the happiness of the wise.'

भवतां अस्माभिः मातापित्रोरात्मनश्च पुण्याभिवृद्धये कौत्सगोत्राय मित्र
चतुर्वेद पौत्राय रणप्रभ

Fourth page.

चतुर्वेदपुत्राय श्रीप्रभचतुर्वेदाय किष्किहिवजरा
पश्चिमेन पिप्परिकाया उत्तरेण जलुकाया पूर्वेण उजानग्राम दक्षिणेन
रभिराघाटनैः जल कुहनामग्रामः कार्तिकपौर्णमास्यां उदकपूर्वं प्रति
पादितः यतोऽस्मदंशैरन्यैर्वा ग्रामिण्यतिभिरस्मदायोनुमन्तयः प्रतिपाल
यितव्यश्च योऽज्ञानतिमिरपटलावृतमतिः उच्छिन्वादाच्छिद्यमानवोनु
मोदेतस पञ्चभिर्महापातकैस्त्रयुक्तः स्यादिति

Fifth page.

उक्तचभगवतावेदव्यासेन व्यासेन वज्र
भिर्व्यसुधाभुक्ता राजकौ स्मगरादिभिः यस्य यस्य यदा भूमिलस्य तस्य
तदा फलं षष्टिवर्षसहस्राणि स्वर्गे तिष्ठति भूमिदः ॥ उच्छेत्ताचानुमंताच
तान्येव नरके वसेत् शककालसंवत्सरेऽप्येतेषु षट्कोन (?) त्रिंशोत्तरेषु लि
खित मिदं शासनं साधिविग्रहिकेनाउल लिखितं ॥

Translation of the Multāye Plates.

(On the Seal) SRI' YUDHA'SURA, (the adopted name of the prince.)

Swasti! Sprung of the pleasing lineage of the *Raṣṭrakūta* (*Raṣṭore*), like the moon from the ocean of milk, was the Prince SRI' DURGA RA'JA through whose conciliatory conduct to the meritorious, and his vigorous energy, extending his rule to the ocean, secured him the good will of both parties, (his friends and enemies.) His son was GOVINDA RA'JA, whose fame was earned in many a battle;—from him was born the self-controlling and fortunate Prince MA'SWAMIKA RA'JA, the unrivalled, whose valor is every where the theme of song, who never turned his back in battle and was always victorious. His son is SRI' NANDA RA'JA, much respected by the pious; handsome, accomplished, humane, faultless, a dreadful avenger (*kāla*) on his enemies: foremost of the aspirants for military renown, chief of the dignified, and prominent among the active and intelligent, the very tree of desire (*kalpa druma*) to the necessitous.

All natural and acquired qualities seek refuge in his virtuous breast, a firm *Brāhmaṇa*—a firm *Bhāgavata**—his surname is SRI YUDDHASURA†, (the hero of battle.) He hereby proclaims to all his officers, nobles, and

* That is, a rigid disciple of VIṢṆU.

† Mr. OMMANNEY reads 'Ghorowa Sur—(Ghorowa the Sanskrit for Gond)' but the word is evidently the same as that on the seal.

the holders of villages, "Be it known to all of you that we, for the promotion of our father and mother's virtues, consecrating with water, present to Sri PRABHA CHATURVEDA* of the *Kautsa* tribe, the grandson of MITRA CHATURVEDA, and son of RANA PRABHA† CHATURVEDA, the village named *Jalau Kuha*‡ bounded on the west by *Kinihi vajura*, on the north by *Pipparikā*, on the east by *Jalukā*, and by *Ujānagrāma*§ on the south,—on the full moon of the month of Kartika.

Let this gift be held unobjectionable and inviolate by our own posterity, and by princes of other lines. Should any whose mind is blinded with ignorance take it away, or be accessory to its resumption by others, he will be guilty of the five great sins.

It is declared by the divine *Vyāsa* the compiler of the *vedas*, "Many kings have in turn ruled over this earth, yet he who reigneth for the time is then sole enjoyer of the fruits thereof||. 'The bestower of lands will live sixty thousand years in heaven, but he who resumes it or takes pleasure in its resumption is doomed to hell for an equal period.'"

In the *Shakakālī*, six (¶) hundred and thirty years over, was written this edict (*Sāsanam*): *ĀULĀ*, the well skilled in peace and war**, wrote it.

Arabic tombstone in the Society's museum.

The stone containing the Arabic epitaph which I have lithographed in Plate XLV. was presented to the museum by Dr. MILL, Principal of Bishop's College, previous to his departure, as noticed in the proceedings of the 1st November (printed in the present number). The account there given of the place whence it was brought "a ruined burial ground on the African coast of the Red Sea" corresponds so closely with the locality of a similar tombstone depicted by Sir GRAVES HAUGHTON in the first volume of the Royal Asiatic Society's transactions, while the stone itself agrees so precisely with the description there given, in appearance and in date, that I cannot help imagining it must be the twin brother of the one carried home. I may quote the very words from Lord VALENTIA's travels also borrowed by Sir G. HAUGHTON :

"On the northern side (of the fort of *Dhalec-el-kibeer*) are the ruins of two small mosques built of stone, with round cupolas at top

* Commonly pronounced *Chaubē*.

† Mr. OMMANNEY reads *Ratka* but the original has evidently *Rana* written with ऱ instead of र.

‡ Apparently a vernacular name, 'the well of water.'

§ The sadar amīn, Mr. OMMANNEY says, would read उद्दानपात्र, but the second letter is evidently a *ja*, and the class of the succeeding nasal confirms it.

|| That is, I suppose, his power is absolute to grant endowments, &c.

¶ I have kept here *Shatkena*, as read by Mr. O.—See the preceding remarks.

** *Sandhi vigrahi*,—(the minister?)

but of a rude workmanship. In the one toward the sea is an Arabic inscription cut on a stone placed in a recess. Around the mosque a great number of monumental stones are placed upright in the ground at the heads of the persons whom they commemorate; many are well carved, and beautifully adorned with flowers and other ornaments, some in the Cufic, some in the Arabic character. As the stones are in general of a portable size, Mr. SALT was desirous of taking one away, but as he was assured by the priest that this could not be done without express permission from the Nayib of *Massowah*, he contented himself with taking a copy of one inscription which seemed to be held in the highest veneration, though externally it had nothing to recommend it, being indifferently carved and having a corner broken. The priest informed him that it belonged to the Shekh or Sultán who built the tanks. It is immediately opposite to the principal mosque, and by the natives constantly kept moist with oil."—Vol. II. p. 41. January 14, 1805. Dhalac el Kibeer. "At daylight I (Mr. SALT) went with ABDALLAH and the two Europeans to the northern mosque for the purpose of getting possession of some of the monumental stones mentioned in my former account. The best finished inscriptions were engraved on stones too heavy to carry away. I therefore made choice of *two* of the most perfect carved in different characters that were portable, and wrapping them up very carefully, proceeded back to our lodgings, not quite satisfied, I own, with the propriety of what I was about."

Mr. SALT goes on to describe the contentions and dangers he had to encounter, and the bribes he had to pay before he succeeded in packing off his sacred spoils. "When the trouble and expense, adds Mr. (now Sir G.) HAUGHTON, that have attended the procuring this tombstone are considered, it will be matter of regret with every one that these had not the good fortune to be bestowed on some object of greater interest."

The foregoing extract will serve, *mutato loco*, to detail the process of abstraction of the gravestone our museum boasts, if its removal be an object to boast of at all:—at any rate it affords us an authentic sample of the genuine Cufic character of eight centuries ago, and as such it is abstractedly worthy of a place among our other palæographic monuments. But it is Mr. HAUGHTON's description of the stone itself which may stand totidem verbis as the descriptive roll in our museum catalogue. "The stone which is an unknown misshapen mass and very hard is of that variety of the trap family of rocks to which the term clinkstone seems the most applicable, from the sound

it gives when struck with a hammer. The surface had never been polished and the engraver or stone-cutter took advantage of the natural fracture of the stone, as it was sufficiently smooth for his purpose*. The letters are so slightly raised, that the hand might be passed over the surface without the idea being suggested that characters existed upon it."

In addition to these points of resemblance, the date of our epitaph is but two years antecedent to Mr. SALT's—viz; in the year 1045 A. D., his being 1047: and it might hardly be too much to assume that our MUHAMMAD was the father of the FATIMA whose death that monument recorded!

For the deciphering and translation which follow I am indebted to my brother, Mr. H. T. PRINSEP, one of our Vice-Presidents. It comprehends in fact precisely the selfsame passage from the Koran quoted in the Roy. As. Society's description.

The only doubtful reading is that of the name of MUHAMMAD's father, where the letters are slightly mixed. *Ashafi wald Haida* is the best that can be made of it, but the *d* of *wald* is more like an *r*.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ اللَّهُ لَا إِلَهَ إِلَّا هُوَ
 الْحَيُّ الْقَيُّومُ لَا تَأْخُذُهُ سِنَّةٌ وَلَا نَوْمٌ
 لَهُ مَا فِي السَّمَوَاتِ وَمَا فِي الْأَرْضِ مَنْ
 ذَا الَّذِي يَشْفَعُ عِنْدَهُ إِلَّا بِإِذْنِهِ يَعْلَمُ مَا
 بَيْنَ أَيْدِيهِمْ وَمَا خَلْفَهُمْ وَلَا يُحِيطُونَ
 بِشَيْءٍ مِنْ عِلْمِهِ إِلَّا بِمَا شَاءَ وَسِعَ كُرْسِيُّهُ
 السَّمَوَاتِ وَالْأَرْضَ وَلَا يَئُودُهُ حِفْظُهُمَا
 وَهُوَ الْعَلِيُّ الْعَظِيمُ هَذَا قَبْرُ مُحَمَّدٍ

* There is another advantage in the natural cleavage, viz. : that the surface is black, whereas the interior is of a much lighter color, so that the letters become visible as in the lithograph upon a very slight abration of the intervals.—ED.

بن اشف ولد دا نوفي يو اثنان
ثمان عشر خلون من جمادي الآ حر
سبع وثلاثين وار بعـائة رحمة الله
والحقه بنبيه محمد صلى الله عليه

Translation of the Arabic Epitaph.

In the name of the most merciful God, ' God ! there is no God but he ; the living, the self-subsisting ; neither slumber nor sleep overtaketh him ; to him belongeth whatsoever is in heaven and on earth. Who is he that can intercede with him, but through his good pleasure ? He knoweth that which is past and that which is to come unto them, and they shall not comprehend any thing of his knowledge, but so far as he pleaseth. His throne is extended over heaven and earth, and the preservation of both is no burthen unto him. He is the high, the mighty* ! ' The tomb of Mahomed, the son of ASHAFI WAD HAIDA (?) deceased on Monday, the 18th day, being past of the month of *Jumadī ul ākhir* in the year (of the Hijira) four hundred and thirty-sevent†. May God have compassion upon him and unite him with his prophet, MUHAMMAD, on whom be the blessing of God.

Inscriptions from Hund, near Attock.

In M. COURT's ' Conjectures on the march of ALEXANDER,' published in the July number of last year's Journal‡, occurred the following passage : " On the western bank of the Indus ruins may be observed at *Pever Toppi*, *Hound*, and *Mahamadpur*. Those of *Hound* are all striking, and there may be found blocks of marble containing inscriptions traced in characters quite unknown to its inhabitants."

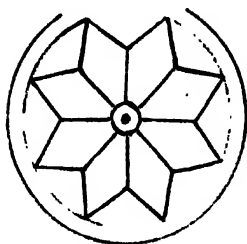
This intimation was not of a nature to be lost sight of, on the occasion of a second visit to the country, by so enterprising a traveller

* SALE's Koran, vol. I. page 48. This passage, which is justly admired as containing a noble description of the Divine Majesty and Providence, is often recited by Muhammadans in their prayers ; and some wear it about them engraved on an agate or other precious stone (Reland de gemmis, Arab.) It is called the *āyat ul kursi* from the mention of the throne of God toward the conclusion.

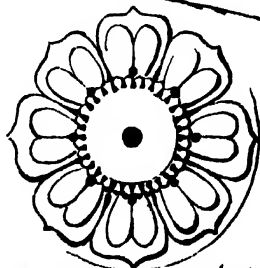
† Equivalent to the 30th December, 1045, Monday. (See useful Tables.)

‡ Journal Asiatic Society, Vol. V. page 395.

ॐ नमो भगवते वासुदेवाय ॥
 क्रीडिमुपदिशंति ग...
 उः येनेषि कुतुहलं पुपुल्ललदे...
 उडिबुल्लपिपडिडमुतने...
 मविनेमंगुड...
 मेरेयं पडीमावः ॥ य सयं कल्ले वंमः मी...
 विपनमम हे भिवर क...
 यडमिडिचिरमी...
 उ... मुमे...
 रेपमुमपविडु...
 न... मड...
 तुमेय...
 उमुड...
 मविनेमंगुड...
 मेरेयं पडीमावः ॥ य सयं कल्ले वंमः मी...
 विपनमम हे भिवर क...
 यडमिडिचिरमी...
 उ... मुमे...
 रेपमुमपविडु...
 न... मड...
 तुमेय...
 उमुड...



Nº 4. on a red stone near Hund



Nº 3 on a stone at Hund

श्री गुरुभ्यो नमः

उ ह म म न र ज

ॐ नमो भगवते वासुदेवाय ॥

A Burnes des

from a brick of some ruins on the Hindu Kosh

J. Prinsep del.

as Captain BURNES. Finding therefore that M. COURT had not since enjoyed an opportunity of following up his discovery, he hastened on reaching *Attock* to fulfil the desire I had expressed to obtain accurate facsimiles of the writings at *Hound* or *Hünd*, a ruinous place situated on the north bank of the Indus, about 20 miles above *Attock*.

"I have, however," writes this zealous and active explorer, "not only got facsimiles, but rája GULAB SINGH, when he heard of my curiosity immediately sent me the stones themselves, and I have placed them in deposit at *Pesháwer* in charge of mullá NAJIB, subject to your commands, that is, if they be found worth sending, they shall be sent to you: they are all on marble, and appear to me to be in the Sanskrit tongue.

"No. 1, (lithographed on a reduced scale in Plate XLVI.) is an inscription said to be fifteen hundred years old, which had found its way into a moslem building, though originally in a Hindu temple. A follower of the faithful made a mortar of it and thence the round hole, in which the barbarian pounded his *massála*, (*culinary condiment*.)

"No. 2, (see Plate XLVII.) is an inscription at the base of an idol: but the image has disappeared with exception of his two feet, having been destroyed by the idol-breaking (*but-shikan*) Mahomedans. I fear it is too much mutilated to shew more than the nature of the writing.

"Nos. 3 and 4 are ornaments cut upon other stones, the former very neatly in white marble. No. 4 has the addition of a shell, and a monogram,"—(the word *srí* in an old form of *Nágarí*.)

"As to inscriptions I have got intelligence of three others on the road across *Hindu Kush* into *Badakshán*. There is one, Babel-like, on a brick from a ruin lying between *Kuner* and *Bajour*, (see foot of Plate XLVI.) and I have sent a man to copy the whole, as well as for others of which I have tidings, one on the small road between *Dur* and *Arab Khan*, and the other in *Cashgar*. I hope they will all ere long appear in your journal, and I wish any might turn out Greek, but the only Greek article I have yet heard of, is a helmet on an idol in the same neighbourhood which I hope soon to possess."

Inscription No. 1. is, as Captain BURNES supposes, Sanskrit, and had we the stone itself instead of a copy made by hand, I think all that remains on the mutilated fragment might be read:—but, however well executed, it is clear that in the present facsimile the *m* and *s* are frequently confounded, also *ch*, *r*, and *n*, which nearly resemble one another. Again the cross line in the *sh* ष, seems omitted where

we see a प surmounting a क contrary to the rules of the Sanskrit grammar. The correction hazarded on this score in the third line is of some importance, because it brings in the powerful *Turushcas* (or Turks) as foes overcome by the nameless hero of the record. The only name on the stone is that of Śrī TILLAKA BRÁHMAN, who was most probably but the composer of the versification, or the engraver ! so that nothing valuable to history has been gained but the fact of the extension of Indian rule to this point of the Indus, and its early struggles with the Tartar tribes beyond. As to date I should guess, and that may be done with tolerable accuracy now from the gradual transformation of the Devanāgarī letters, that it belonged to the seventh or eighth century—somewhat less than local tradition assigns.

I have collected together line for line such words and sentences as could be safely transcribed :—in some (as the fifth line) by supplying an initial word, KAMALÁKÁNTA[†] pandit has found a complete half verse. The concluding words सुत्रकी होमि *sutra kí hogi* has the sound of pure Hindí ; it is not Sanskrit.

Transcript of Inscription, Plate XLVI.

- 1 खस्ति १॥ भूपतिव्यतिव्यं वा यैररातिभिरेजते
- 2 कीर्त्तिमुपरियां रिंगते हितायतरिभिःस्वयं
- 3 ताःयेनोद्रिक्ततुरुष्कपुष्कलपल (त्रासा) करेणात्मना
- 4 उक्तिश्चारविर्वर्द्धितागुरुजनेविप्रेस्ससंख्यं (च) : ति
- 5 (राजायः संविशेष संग्रह रतिर्यत्नप्रजापालने। हृन्नर्नसरनदेव
दपतव्कि किंनलोके दुरा (पं)
- 6 नेपेयंपार्वतीसखः॥ असयंकल्लठोधंमःमी षदर्वीगतःत....
- 7 विपनममरेसिन्धुराक लःतस्य .. तिपितुर्नगुण
- 8 यत्यमितिचिरस्थी य यसः सौजन्य
- 9 गुण जा
- 10 देवस्यमहाविभू स्मराद्यः यमनुचन्द्रोरयन
- 11 नायेर्हि महा हानतपनंस स्मान्तवास
- 12 न्तनेय (क) ल्याणचेतसः ॥ नंपक तर्तये ... प्र ... य
- 13 न्यस्तत्र श्रीतिष्ठकः ब्राह्मणः । .. स्य जिह्वे सुत्रकीहोमी

Translation.

1. . . Blessings ;—whose kingly and priestly rule even among his enemies spreads :
2. . . above his glory goes . . . for pleasure. . . .
3. . . the powerful flesh-eating *Turushcas* causing alarm to,
4. . . lavishing bland speech on spiritual superiors and brahmans without number.
5. Such a prince as attracts all things to him ; persevering in the protection of his people.
 what in the world is difficult (for him) to accomplish ?
6. . . husband of *Pārbati* ; . . . went on a road, . . .
7. . . elephant . . . whose mother's (?) and father's virtue
8. . . endure for ages, . . . glory and excellence.
9. virtue. . . .
10. of *Deva* the great riches, . . . rule . . . moon . . .
11. . . great . . . sun . . . living among.
12. . . the cheerful-minded ; . . .
13. . . then *Śrī Tillaka-brāhman*, . . . (shall be made beautiful ?)

Of the inscription under the mutilated image I can make nothing more than that it is Sanskrit, and of about the same age. I will therefore conclude with an extract from Captain *BURNES*' letter, alluding to the sketch of the *Khaiber* tope, made by Mr. *GONSALVES*, roughly copied in Plate XLVII.

“ I have just seen the grand *Khaiber* tope of which so much has been said. It is like all the others I have seen, but the pedestal, or basement, or whatever it should be called is different. This looks more like a sepulchral monument than any other tope. It is near *Lāl bég ká garhī* in the very pass, and is a very conspicuous object on the right hand as you pass. It has not been opened, and of course is considered to contain great treasures, which I hope you will ere long have the opportunity of investigating. Besides this tope there are several forts in *Khaiber* of massive structure crowning the summit of the hills, and attributed to the time of the *káfirs*, or of course the era preceding *Islām*.”

I thus prematurely introduce a mention of this unopened tope, that I may draw the attention of those who are about to undertake its examination to some points of inquiry particularly solicited by a German savant, Professor *RITTER* of Berlin, who has just favored me with an essay on the architecture of these topes, and is now printing a more elaborate memoir, lately read to the academy of sciences at Berlin, on the curious proportions, construction, and destination of these singular monuments, which he supposes to develop and designate

remarkable facts regarding Buddhism and its influence on the history of central Asia.

I must extract the passage from professor RITTER's letter: "A few words will shew how desirable it would be to communicate the original measurements, ground plan, dimensions, &c. of the *tope* of *Manikyala* whose interior has been laid open by General VENTURA: or if this should be impossible, it would be extremely interesting to know the inner construction of those singular compact colossal stupas by more accurate investigation and measurement; particularly the manner of constructing the cupolas and the inner little chambers, and the square mass of masonry exactly in the centre of the mound, regularly built of quarried stones*. Now by combining the number of feet you mention in the excavation from the height to the base of the last small chamber, or bason under the immense stone slab, and by the singular equidistant proportions of the places where antiques and coins were found as originally deposited, I am induced to conclude that there must have been originally *nine stages*, or stories, from the base of the monument to the platform of the cupola: these nine stages corresponding with the nine *nirvanas* of Buddhist doctrine, and with the monuments of nine stages anciently erected in *Ceylon*. The stages are only *intrinsically* revealed in the Bactrian *topes* by the floor of the chambers on which the medals were deposited; the dilapidation of the cupolas by the Musalmáns to plunder the metallic ornaments at the top, having filled up with rubbish falling in from above the whole interior of the lower: (*carré parfait à douze pieds tres bien etabli au centre, qu'on a creusé à dix pieds de profondeur, dont la battisse régulière s'est terminée la* &c. †). But how did these stages communicate with one another? were there staircases?—No mention is made of any steps from floor to floor.

"The other excavations by Messrs. MASSON, GERARD, HONIGHBERGER, &c. give no nearer insight into the actual architectural construction of these monuments, and seem made directly from top to bottom merely to get at the hidden in the readiest manner. I therefore venture to invite your attention to the contents of my memoir."

I have given the passage at length to prove to our explorers in the north what keen eyes are fixed upon their proceedings, and to shew how necessary it is to leave nothing unnoticed in their operations on the *topes*; but for myself I have no anticipations of the Professor's

* J. A. S. III. p. 315. This passage was afterwards explained to have been somewhat misunderstood,—see M. COURT's account of the same *tope*.—ED.

† Ditto page 317.

Specimen-facsimile of an Inscription from Kalinjār, in the As. Society's Museum (last part).

। च न ग्रा व शु क्सी म उ तं कु ला भि र न्त का ष्ठ शि दि वा क री सि हं द म ना व श उ ल व य मि त्त नु जा
 ग र वे ष्म षि ति श्र ति सु रा क र म न्नी त म् ॥ २५ ॥ अ म र क वि र न्त्वा श्रु वं त्वा रा सा यं ष्य त्स प ^(३ letters)
 य द्वा वि ष्म ण् अ व द्वा दु उ णा कै ष्म वै ता मि कु स ऊ कृ तं कु त्तु क म नी शु र्वा य दी ति त र णो म ॥ २६ ॥
 पा द ठा द्वा ण त त्तु त्ति नू त म नि त सं त य रे शु भ ल वि वे द्या ह्म षि सि ह्नि ॥ २७ ॥ अ के पि ॥ प्र म्वा त २४१
 म ना वे द्या ^(५ letters) ॥ २४ ॥ प र रा णी ति द्वा ण मि म्वा दे सु नी क ष्म ण् त रा व त्त म न्नी त न यु न्नी त
 द या धि नो ष व म्वा ना न्ज न द की कृ त त ॥ २४ ॥ का न अ व अ न्वा न्प ना लि का न्ति त्त न्ना उ र्वा षि ष
 री त्र यौ सु रा ष्म द्द ^(The concluding half line effaced.)
 ॥ ❀ ॥ ॥ प्र मं व त्त का र क ष्या ॥

manuscript.

view being borne out,—of similarity to the *Ceylon* topes. The square central building seems to me to be built regularly for the sake of forming the chambers of deposit, the vaults outside of this rubbish is filled in for economy's sake; and an outer crust of masonry in form of a cupola completes the pile. There is no such outward mark of Buddhism I believe on any of the Bactrian topes as on those of *Sárnáth**, and *Bhilsa*, where niches on the four sides were provided with *chatur buddha* shrines. Whether of Buddhist sovereigns or of others, these tumuli were evidently the depositories of bones and ashes to which the coins and trinkets were merely accessory. Professor WILSON has now before him in London the contents of many more topes than we have had the pleasure of seeing, and ere this I dare say he has satisfied the eager curiosity of my learned correspondent and of his numerous countrymen now interested in the development of this train of research.

Inscription on a stone slab in the museum, Plate XLVIII.

While endeavouring to keep pace with the influx of inscriptions from abroad, I must not forget the task I had set myself, of rendering an account of those deposited in our museum, a task which my readers will doubtless be happy to find is now rapidly drawing to a close.

The subject now to be explained is inscribed on an oblong slab of sandstone, $4\frac{1}{4}$ feet by $2\frac{1}{2}$, which I conjecture to be one of those presented by General STEWART, and inserted in the catalogue of vol. XV. of the Asiatic Researches, as "a stone slab from *Ajaya-garh* in *Bundelkhand* with a Sanskrit inscription, or "a stone bull from *Kalinjar*, with a Sanskrit inscription." Should the bull be unconnected with the inscription I should incline to locate the present inscription at *Kalinjar* because of the exact similarity of its alphabet to that of Lieut. SALE's inscription from the same place, inserted in my August No. page 665, Plate XXXII. and further the name of MALIKA occurs in both, but the inscription itself tells us it was set up in the fort of *Jayanagara* along with an image of *Huri*, and a temple and image of *Keshava* in the same place. *Jayanagara* is nearly identical with *Ajaya-garh* in signification: it may have been substituted to suit the metre. None or only one of the long list of names has a regal title; on the contrary the family is expressly said in the 14th verse to be of the *Kāyastha* tribe, and their highest genealogical claim seems to have been that

* A most careful and elaborate elucidation by drawings and measurements of the *Sárnáth* tope, by Captain CUNNINGHAM, is now under publication in the Asiatic Researches: but the plates will take a long time for their proper execution.

they sprang from a village, *Kaushamyapura*, in which *Kusha* and *Sundā*, the mythological sons of the rishī *KÁSYAPA*, had once resided. At one time, probably when the temples and images were erected, they were ministers of a prince of the Solar line. In this respect therefore the record is valueless. Its merit as poetry the learned *KAMALÁKÁNTA VIDYÁLANKÁRA* does not rank much higher ; yet being in our museum and being a fine specimen of the favorite character of that part of the country in the middle of the 14th century, I cannot refuse a place to the translation made for me by *SÁRODÁPRASÁD* from the elder pandit's accurate transcript, which I have myself compared letter for letter with the original. The characters are called *chitra-varnán* in the 36th verse, but this may be merely a laudatory epithet.

Jayanagar Inscription.

प्रायः प्रौढेन्द्रियायाः प्रचुरतरसुखास्तेष्वमस्तेष्वकादो विभ्रदिभ्नांतदृष्टि
 द्रुतचकितरतोत्कीर्णपूर्वाणुरागः उद्यच्छीवत्सदीपद्युतिरभसरसोक्तासि
 तानङ्गहेतिर्देवः श्रीविश्वमूर्तिर्दितितनयरिपुर्विश्वमम्बोविभक्तुं ॥ १ ॥
 पिण्याकपिण्डमिवचण्डरुचिर्मुंरारिर्गोवर्द्धनाचलमसौक्यतवान् कराये
 प्रेमेत्कवल्लरजनीजनिताद्भुतश्रीः श्रेयांसि वो दिशतु गोमण्डपस्थमानः
 ॥ २ ॥ श्रीखेदनर्मललितं विदधन् हरिर्वी गोपीकरोरकुचगुणितशायक
 श्रीः कामातुरान्तरकुरङ्गबधूविपत्तान् रन्धन् कुतूहलतयाधियमातनोतु
 ॥ ३ ॥ मञ्जत्स्थमुज्ज्वलतनूर्भवभारभेदी यो वेददुग्धमुदधाविदमुज्जहार
 शंखासुरासुहरणः किलमीनरूपी देवः श्रियःपतिरघं भवतांविहन्तु ॥
 ४ ॥ सम्बर्त्तविन्यस्ततटे जलानां रेमे निधायः खलु योगयुक्त्या जगद्भूतिः
 संस्थितचिद्रुचिश्रीः स वो विभूतिं कमठः करोतु ॥ ५ ॥ क्रोडीकृत्य
 विशालनिसुरतरान्दंतान् वहद्भुद्वहोमूर्तिर्विस्तृतधर्मकर्मनियतिर्वी
 सोधियाम्माधवः औप्रात् पिण्डितपङ्कपिण्डलरुचिर्विश्वंभरामुद्वेष्टं
 मे वर्द्धयतां सविश्ववसतिर्नित्याधिनाशोदितः ॥ ६ ॥ शुभं नृशृङ्गाम्बनि
 विष्टरश्मिः सहस्रभागोः श्रियमाददानः सुदानवंप्रोत्तुनितैः कराग्रैः
 स वो नृसिंहो दुरितं भिन्तु ॥ ७ ॥ शुक्राक्षिविद्येपमिषाद्रिपूणां विरूप
 यम्रीतिमिवामिताभः वलिप्रमादादववर्द्धमानः स वामनोमेभ्युदयं ददातु

॥ ८ ॥ दिजकरेक्षितिमाकृतशासनोदधदनुद्धतकद्रिपुयोधिताम् जय
यशोभजनाञ्जयतिप्रधीः सपरशुः किल रामइतिश्रुतः ॥ ९ ॥ नास्त्याय
तिर्यस्य पराक्रमाणां महावने पुण्यजनापहारी प्रमोदजालं तनुतेवह्वती
कृतोविपद्भ्यः स धिनोतु रामः ॥ १० ॥ आसीन्महर्षिःसकिणादिवेदीज
नोविदां काश्यपइत्युदारः यंजातवेदो विधिभिः सुराणां सटप्तये यज्ञ
विधिःससर्ज ॥ ११ ॥ कुशसुनाभइति प्रथितौ सुताविह बभूवतुरस्य म
हात्मनः अपितमोहरणे तदनुत्तमं रविशशिद्वयमुद्धततामसं ॥ १२ ॥
कुशस्य कौशाभ्यपुरे निवासो बभूव पुण्योन्नतचारुमूर्त्तिः अगद्यशक्तिः सम
नुष्यमौख्यं तत्र स्थितिं कोपि पुमान् बभार ॥ १३ ॥ सकोपि कायस्थतया
प्रतीतो मनीषिभिर्मनितसेमुशीकः सट्टोत्रमादीनतमाशयञ्छ्वं काश्यपी
भूतमलं चकार ॥ १४ ॥ गवांप्रपांगोलुतनौ शुभायां सुमंत्रमार्गावरणेमु
नित्यं श्रियोनिवासादजयत्प्रवंशो वास्तव्यतामप्रतिरूपकोद्रिं ॥ १५ ॥
जङ्गे मनस्वारतया जनीनां महीक्षितां दण्डनयाङ्कुरैश्च सुविद्यया धीर
कुलस्य धीमान् हारुकनामाभवदत्र जन्मः ॥ १६ ॥ लिपिकरकुलकोटेः
कोटरस्यागमानां सुकृतविटपिमूलस्याश्वस्यद्युतीनां अभवदमिततेजा
जल्लग्नस्तस्य सूनुः सुरगुरुरिव भूमौ भूपतीनां क्रियार्हः ॥ १७ ॥ ततो
गुणानां स निर्धर्विधिज्ञो गंगाधरोजायतमानवेद्रः यस्मिन्नृपे भूरतिशक्र
वृत्तेमन्येतिनाकश्रियमाससाद ॥ १८ ॥ कमलापतिपादपंकजेन्द्रद्वयं
बिम्बदनिन्द्यमानसः कमालइति नामकोमल सुकृतशोभित कायसुन्दरः
॥ १९ ॥ ततोजन्यजनीकाशेमालिकोमलवियहः ॥ मालाभूतमिदं यत्र
गुणवृन्दं विदिद्युते ॥ २० ॥ यद्गसिंहोरत्नसिंहेजगसिंहः सुतोत्तमाः
जाताःसमरसिंहश्च चत्वारश्चतुरास्ततः ॥ २१ ॥ तेषांसंख्यावतां श्रेष्ठो र
त्नसिंहे महामनाः अजायत जितात्मनः श्रीपूतानमितौजसः ॥ २२ ॥
उत्पूर्वोपूर्वमूर्त्तिः प्रतिकृतविनयो भूत्सुमैकःप्रवीणः प्रीतिप्रज्ञारक्षीनांगण
पतिरपरोविश्वविरूपेतायः धामज्ञानोद्धतानामतिहृतमहिमानामना
मोन्नताङ्गो रेजे राजीवचक्षुः क्षितिपतिसमितिप्राप्तमानानुभावः ॥
२३ ॥ दिग्जनीकार्यकुहरविश्रांतयशसास्तुतः चन्द्राजेयनरेद्राणां

सन्निवत्तमुपागतः ॥ २४ ॥ तयोःसविज्ञानविधिर्भनीवीमनोरमो नान
इतिप्रतीतः श्रीभोजवर्माणांमुपेत्यनाम्बंस्त्रमञ्च मित्रोदयमाततान ॥ २५ ॥
प्रियंवदत्वात् प्रमदाजनानां सभ्यात्मकत्वात् जगतीश्वराणां पुमानयं प्रा
ञ्चतया गुणी यो नानाभिधानं सफलौचकार ॥ २६ ॥ यस्मिन् गुणाधार
तयाप्रदिष्टे विद्वद्यमात्रेणय कुम्भमुच्चैः नवाभिषेकामिव राजलक्ष्मीं प्रभुश्चि
रं कामयते फलाम् ॥ २७ ॥ तथा बज्रप्रखलकंबुजालं पयोनिधिं यस्य यशो
वसारि अमंडयन् मंडनसारशोभाधिकेन रूपेण मनोनुहारि ॥ २८ ॥
विहारिणी यस्य दिगङ्गनाभिः समं समृद्धाश्रुतवृत्तवृत्तिः मरुदधूभिः किल
कर्णपूरीकृतामुनिभ्यो मुदमादधाति ॥ २९ ॥ नवेन्दुसंकाशतनुप्रकाशः
सदासयज्ञः कुमुदोद्यमुच्चैः मनोरमत्वान्महनीयदेहः पृथ्वीधरंतंतनयो र
राज ॥ ३० ॥ अवेत्य पातंभवनीरराशौ समुत्तितीर्षुर्दयितं श्रियोमुम् ॥
समुत्तये पुण्यतरानुभावादाराधनीं वृत्तिमलंकरोति ॥ ३१ ॥ समीप्य
संसारसुखं पटीयान् आयातरम्यं विषयानुसारि मुमुक्षुरात्मोदयमिदं
कीर्त्या विभर्त्ति सत्तुण्डसरोरुहेय ॥ ३२ ॥ अथसुललितबुद्धिर्नानय
प्रभावो जयवति जयदुर्गे कीर्त्तिहेतोः फलानां सुरचित हरिदेहं पैत्रमेतं
गुणज्ञः प्रविततनयजालोकारयत् कृत्यवेदी ॥ ३३ ॥ माननीयमति
र्नानः प्रतिमीकृतकोशवं प्रासादं स्थापयामास पितृविश्रामहेतवे ॥ ३४ ॥
यावन्नगा वसुमती मरुतां कुलानि रत्नाकराः शशिदिवाकरदोमिवृन्दं ॥
तावत्सपुण्यवसतिर्मनुजो विधातुर्विश्वोदधितिष्ठति सुरोत्करमाननीयः ॥
३५ ॥ अमरपतिरनन्योगुर्वलंकारसारां पटुपदलपनीया मेघश्लिष्टःस्थ
विष्टः अचयदुरगुणार्कः संभृताभिज्ञसंज्ञः कृतिकृतुकमभोषुर्वाक्पदी
रुच्यते ॥ ३६ ॥ क्षणदेशेक्षणगतश्रुतिभूतसमन्विते संवत्सरेषुभेलेखि
वैशाखेमासि सद्दिने ॥ ३७ ॥ अंकेपि १३४५ समयावैशाखः
परस्परप्रीतियुजौ प्रियंवदौ सुतौ सुकर्मात्तरनाथवत्सभौ नयेनयुक्तौभुव
नेयश्चिन्नैःसचंपकायां तनयावजीजनत् ३८ कायस्थवास्तव्यांते प्रतो
षिकांश्चित जयपुरदुर्गाधिपठकुरसुयौसुत पंसुहदु केनमेतं लिखितं
सकारश्रीगोपाल शुभंभवतुकारकस्य ॥

After transcribing the above and carefully comparing it letter for letter with myself, KAMALA'KA'NT begs to add the following protest against various orthographical errors which I have insisted on maintaining in accordance with the original text.

॥ श्रीकमलाकान्तन यथादृष्टं तथापठितं पाठितं लेखापितंच एव श्लोके
षु मध्येकचित् क्वचित् व्याकरणाच्छन्दोर्लकारदोषा दृश्यन्ते तद्दोषहेतुर्न
कमलाकांतः ॥

Translation.

MAY DEVA (VISHNU), the father of all, support this universe, whose form he is ; luxuriating in the embrace of the youthful LAKSHMI, unwearied, with frequent start and flash of eye, intoxicated with delight ; whose breast-jewel, *sri vatsa* shines like cupid's arrow, shot by the expanded bow of its own ray. (1.)

MAY MURARI (VISHNU) bless you, who supports the mountain *Goverdhana* on the palm of his hand like a lump of *penydska** (the cattle looking on), whose wondrous beauty has captivated the lovesick milkmaids of *Ballava*. (2.)

MAY HARI the warm companion of LAKSHMI, scarred by the touch of his maidens' breasts, sportively thwarting the enemy of the licentious deer, inspire you with supernatural knowledge. (3.)

MAY DEVA, the fish-transformed husband of LAKSHMI, restorer of the milk of the vedas which lay buried in the ocean—the refulgent, the destroyer of dependence on this world—the slayer of *Sanhāsura*,—destroy your sins. (4.)

MAY the Tortoise, who unmindful of the deluge played on the ocean shore in abstraction, the refuge of the world, constant in refulgent beauty, prosper you. (5.)

MAY MADHAVA, in the form of a boar, who delivered the earth by the thrust of his cruel crooked tusks, and extended the merit of virtue ; the abode of intelligence, of earthy colour from the mud he has thrown up, increase our blessing. (6.)

MAY NARASIMHA the man-lion, bright as a thousand suns, who preyed on the body of *Hiranyaka kusipa* father of the virtuous *Prahlāda* and supported him with uplifted hands, destroy your sins. (7.)

MAY that *Vāmana* (dwarf) bless me, who changed the rule of his enemies, on pretext of piercing the eye of *Sukrachārya* ; who increased in size for the ruin of *Bali*. (8.)

THAT *Parashū* is become glorious, who has gained the surname of *Rāma* from his victories ; who granted to the brahmans his well-governed earth, who warred with the wicked, and is acute in sense. (9.)

MAY *Rāma* too, whose power is infinite, the giver of all joy, the destroyer of the *Rakshasas*, save you from all danger ! (10.)

THE venerable sage KASHYAPA, first expounder of the vedas, most learned of men, was created to satisfy the deities with burnt offerings. (11.)

* Mustard seed after the oil is expressed.

This noble spirit had two sons *Kusha* and *Sundbha* resembling the sun and moon, in the dispersion of darkness. (12.)

KUSHIA lived at *Kaushanyapura*,—beauteous from deeds of virtue, unbounded in strength, goodness, and stature. At the same place resided a certain person, (13.)

Known to have belonged to the *Kāyastha* caste, the ornament of the *Kushyapa* line, respected by the learned, and satisfier of the expectations of the needy. (14.)

He erected a drinking trough (*prapa*) for cattle on the roadside near the pastures. He conquered the mountain fastnesses, being himself the abode of *Pārbati*; he was without rival, and of good descent. (15.)

From him descended *Janha*, afterwards called *Hārūka*, because he stole the hearts of women by his beauty,—those of kings by his just administration of the revenues, and those of the learned by his wit and deep knowledge. (16.)

Superior to all of the writer caste, the receptacle of the *A'gamas*, the root of the tree of virtue, the vessel of light,—he had a son named *JALHANA*, of infinite vigour, second only to the tutor of the gods (*Vrihaspati*) a portly man of diplomacy. (17.)

GANGA'DHARA was born of him, superior to all mortals; the receptacle of all virtues; conversant with religious law, he surpassed *INDRA*, and when king gave to the earth the beauty of heaven. (18.)

His son *KAMALA* on whose heart is planted the lily foot of *KAMALA'S* husband—of no contemptible mind, and of personal beauty correspondent with his virtues.

MALIKA was born of him, resembling *Aja rāja*, of tender person, crowned with a halo of good qualities. (20.)

From him was born these four the most active and the best of sons, namely, *PADMA SINHA*, *RATNA SINHA*, *YOGA SINHA*, and *SAMARA SINHA*. (21.)

Of *MALIKA*, the enslaver of his passions the chaste as *LAKSHMI*, the unbounded in spirit, was born *RATNA SINHA*, who was superior to the other three and whose mind was noble. (22.)

His son *NANA* was glorious, handsome, the most experienced and superior to all in *Sūma*; next to *Ganapati* in mutual love, understanding, and in beauty, and fat, being always at home; he destroyed the pride of the vain boasters who were vain of their strength, he was tall with eyes like the lily: he was respected in the court of *rājas* and was free from sickness. (24.)

His fame had reached the ears of the women on all sides: he was minister of the *Chandra* and *Atreya* lines. (24.)

He was known by the name of *Nāna*, teacher of the religious laws and wisdom to the above dynasties, he was learned and agreeable, requiring not advice of allies when he sent his horse to the *rajā Bhōja Varma*. (25.)

He did justice to his name *Nāna* (i. e. various) by his success among the women through his sweet words, and among kings through his politeness, nay every one loved him as his own life. (26.)

He being fixed as the receptacle of merit, and having attained the *Kumbha* of morals, his father supplicated the new anointed royal LAKSHMI (VARHMA of Ujjein ?) (27.)

His spreading fame adorned the ocean (which is fitted with playful shells) with the additional splendour which it received from his kingdom. (28.)

His wife who increased in riches, as the women resembling the *dikshaka* delight the munis ; she behaved according to the injunctions of the *Srutus* and was worn by the wives of the gods as an ear-ornament, (i. e. they heard of and had regard to her, (29.)

This son NANA whose person was beautiful like the new moon, who never had any mean object of desire, who was the cause of delight of the whole world, and whose person was become beautiful by being agreeable to all, made the king his father glorious. (30.)

He being desirous of crossing the ocean of worldly concerns by the ship of the husband of LAKSHMI, accepted the profession of worship for salvation from the best consideration. (31.)

And seeing the unreal agreeableness of worldly pleasures derived from the surrounding elements, and desiring salvation, he assumed the lily face pure from conversation thus to ascertain self-knowledge ; and was wise. (32.)

This highly spirited NANA caused this well made image of HARI to be placed at the victorious and celebrated fort of *Jayanaguru* in honor of his forefathers, he was a judge of human merits, an illustrator of all morality, well acquainted with religious duties ; and of a mild understanding. (33.)

This man of respectable intellect, established a temple with the image of *Keshava*, at the same place for the final salvation of his ancestors. (34.)

So long as the great mountains, the earth, the gods, the mines of jewels (or oceans), the moon, the sun, and the starry spheres shall endure, so long shall his name exist in this habitation of the creator ; who was the seat of virtue and respected by the gods. (35.)

A person named AMARAPATI being desirous of gaining the curiosity of learned persons composed this inscription, written with wonderful letters, and filled with excellent metaphors expressed in appropriate phrases. He was obedient to all and corpulent, and was like the sun by his eminent qualities. He possessed the title of a wise man. (36.)

This inscription was written on the lucky day of the month of Vaishákha, in figures Samvat 1345. (37.)

He (AMARAPATI) had two sons named SUKARMOTTARANA'THA and BAL-LABHA, by *Champaká* (his wife) who loved one another, were well known in the world and a pattern of morality.

In the town-division of the *Káyasthas*, having a street on all sides, in the fort of *Jayapura**, by THAKUR SUPAU'S SON PANSUHADUKA, was this written. Goodluck attend the author !

* This place must not be confounded with the modern town of Jeypoor, which was only founded by JAY SINGH in the middle of the 17th Century. The name is common enough.

V.—*Meteorological Register kept at Darjiling for August, 1837.*

Day	Barometer.				Therm. in Air.				Wet Bulb Tr.				Regist. Ther.				Rain.				Wind.				Weather, &c.				Boiling Point. Water.
	10 A. M.		4 P. M.		10 A. M.		4 P. M.		10 A. M.		4 P. M.		Max.		Min.		Inches		Morn. Even.		Morning.		Evening.						
	10	4	10	4	10	4	10	4	10	4	10	4	10	4	10	4	10	4	10	4	10	4	10	4					
1	23.166	23.085	61.5	62	61	61.5	58	66	61.5	61.5	61.5	61.5	58	66	61.5	61.5	0.96	N. S. E.	N. S. E.	N. S. E.	N. S. E.	Rain and thin fog.	Overcast and foggy.	Overcast and foggy.	199.4				
2	170	126	60.5	61.5	60	60	57.5	63	60	60	60	60	57.5	63	60	60	7.76	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Heavy rain.	Fog and light rain.	Fog and light rain.	199.4				
3	220	157	63.5	65	63	64	54.5	66.5	63.5	64	64	64	54.5	66.5	63.5	64	43	Calm.	W.	W.	W.	Fog.	Heavy fog overcast.	Heavy fog overcast.	199.4				
4	216	153	62.5	61	62	60.5	58	64	61.5	61.5	61.5	61.5	58	64	61.5	61.5	1.13	N. E.	S. W.	S. W.	S. W.	Fog and light rain.	Heavy rain.	Heavy rain.	199.4				
5	222	152	62.5	62.5	61.5	61.5	58	64	61.5	61.5	61.5	61.5	58	64	61.5	61.5	7.75	Calm.	S. W.	S. W.	S. W.	Drizzle.	Overcast.	Overcast.	199.4				
6	238	145	62.5	63.5	63	62.5	58	65.5	61	63	62.5	62.5	58	65.5	61	63	77	W. W.	W. W.	W. W.	W. W.	Drizzle.	Overcast.	Overcast.	199.4				
7	190	125	63.5	65	63	62.5	57	64	62	62.5	62.5	62.5	57	64	62	62.5	28	W.	W.	W.	W.	Drizzle.	Overcast.	Overcast.	199.4				
8	236	178	63.5	63.5	62	62.5	59.5	64.5	62	62.5	62.5	62.5	59.5	64.5	62	62.5	1.29	Calm.	Calm.	Calm.	Calm.	Rain and fog.	Thick fog.	Thick fog.	199.4				
9	287	220	64.5	68.5	63.5	63.5	59	69	63.5	63.5	63.5	63.5	59	69	63.5	63.5	53	W.	W.	W.	W.	Drizzle.	Overcast.	Overcast.	199.4				
10	287	220	64.5	68.5	63.5	63.5	59	69	63.5	63.5	63.5	63.5	59	69	63.5	63.5	2.20	Calm.	Calm.	Calm.	Calm.	Drizzle.	Overcast.	Overcast.	199.4				
11	292	230	66	66.5	65	65.5	61	69	65	65.5	65.5	65.5	61	69	65	65.5	97	Calm.	Calm.	Calm.	Calm.	Drizzle.	Overcast.	Overcast.	199.4				
12	330	263	63	65	62	63.5	59	69	62	63.5	63.5	63.5	59	69	62	63.5	39	ditto.	ditto.	ditto.	ditto.	Drizzle.	Overcast.	Overcast.	199.4				
13	306	220	63	66.5	62	63.5	59	67.5	63	63.5	63.5	63.5	59	67.5	63	63.5	38	ditto.	ditto.	ditto.	ditto.	Drizzle.	Overcast.	Overcast.	199.4				
14	250	162	64	64.5	63	63.5	59	67.5	63	63.5	63.5	63.5	59	67.5	63	63.5	1.24	W. S. W.	W. S. W.	W. S. W.	W. S. W.	Drizzle.	Overcast.	Overcast.	199.4				
15	231	159	64	62.5	63	61	58	65.5	63	61	61	61	58	65.5	63	61	14	N.	Calm.	Calm.	Calm.	Drizzle.	Overcast.	Overcast.	199.4				
16	280	220	61	59	60	53.5	56.5	63	60	58.5	58.5	58.5	56.5	63	60	58.5	2.17	Calm.	Calm.	Calm.	Calm.	Drizzle.	Overcast.	Overcast.	199.4				
17	287	203	61	60.5	59.5	60	54.5	62.5	59.5	60	60	60	54.5	62.5	59.5	60	..	ditto.	ditto.	ditto.	ditto.	Drizzle.	Overcast.	Overcast.	199.4				
18	271	194	66	64	63	59.5	55	69	63	60.5	60.5	60.5	55	69	63	60.5	21	N. E.	N. E.	N. E.	N. E.	Drizzle.	Overcast.	Overcast.	199.4				
19	288	210	64	63.5	62.5	60.5	57	66.5	63	60	60	60	57	66.5	63	60	40	N. E.	N. E.	N. E.	N. E.	Drizzle.	Overcast.	Overcast.	199.4				
20	296	225	61	63.5	60.5	62.5	57	66	61	62.5	62.5	62.5	57	66	61	62.5	21	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Drizzle.	Overcast.	Overcast.	199.4				
21	297	209	61	61	60	60	56.5	64.5	61	60	60	60	56.5	64.5	61	60	10	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Drizzle.	Overcast.	Overcast.	199.4				
22	262	155	61	66.5	60	63.5	56	66.5	60	63.5	63.5	63.5	56	66.5	60	63.5	46	Calm.	Calm.	Calm.	Calm.	Drizzle.	Overcast.	Overcast.	199.4				
23	242	181	67	65	64	62	56	67	64	63	63	63	56	67	64	63	03	W.	S. S. W.	S. S. W.	S. S. W.	Drizzle.	Overcast.	Overcast.	199.4				
24	285	200	65	64.5	62	62	59	66	62	62	62	62	59	66	62	62	13	Calm.	Calm.	Calm.	Calm.	Drizzle.	Overcast.	Overcast.	199.4				
25	288	226	68	63	63	60.5	59.5	68	63	60.5	60.5	60.5	59.5	68	63	60.5	..	N. E.	N. E.	N. E.	N. E.	Drizzle.	Overcast.	Overcast.	199.4				
26	290	220	66	65	64	62	59.5	68	64	62	62	62	59.5	68	64	62	03	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Drizzle.	Overcast.	Overcast.	199.4				
27	270	164	66	61	63	56.5	56	67.5	63	56	56	56	56	67.5	63	56	..	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Drizzle.	Overcast.	Overcast.	199.4				
28	270	203	66	61	62	53	56	62	59	58	58	58	56	62	59	58	82	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Drizzle.	Overcast.	Overcast.	199.4				
29	279	213	59.5	59.5	59	58	55	62	59	58	58	58	55	62	59	58	49	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Drizzle.	Overcast.	Overcast.	199.4				
30	335	275	64.5	67.5	62.5	63.5	55	67.5	62.5	63.5	63.5	63.5	55	67.5	62.5	63.5	03	Calm.	Calm.	Calm.	Calm.	Drizzle.	Overcast.	Overcast.	199.4				
31	323	232	68	67.5	65	63.5	57	70	65	63.5	63.5	63.5	57	70	65	63.5	04	N. N. E.	N. N. E.	N. N. E.	N. N. E.	Drizzle.	Overcast.	Overcast.	199.4				
Mn.	23.264	23.194	63.6	63.5	62.1	61.7	57.4	66.1	62.1	61.8	61.8	61.8	57.4	66.1	62.1	61.8	24.51*									Cumuli.	199.4		

* Rain by Crosley's Pluviometer, 28.22 inches.
Depression of Wet-bulb Ther. barely perceptible on many days in the early part of the month.

VI.—Abstract of a Meteorological Register kept at the Cathmandu Residency,
for July and August, 1837. By A. CAMPBELL, Esq. Nipal Residency.

Observations at 10 A. M.					Obs. at 4 P. M.					Wind; weather; rain.		Total rain.
Day.	Bar. at 32°	Thermometer.			Bar. at 32°	Thermometer.				At 10 A. M.	At 4 P. M.	
		Air	Wet	Diff.		Air	Wet	Diff.				
July, 1	25,199	75	69	6	25,113	80	71	9		W. fair.	W. cloudy.	086
2	185	75	69	6	073	82	72	10		NW. cloudy.	SW. clear.	230
3	171	76	70	6	121	80	70	10		W. ditto.	SW. ditto.	173
4	203	76	69	7	159	76	70	6		E. ditto.	E. cloudy.	865
5	207	75	68	7	139	75	70	5		E. ditto.	NE. ditto.	064
6	187	75	69	6	099	80	71	9		NW. ditto.	NW. ditto.	194
7	145	75	69	6	053	82	72	10		NW. ditto.	W. clear.	942
8	099	75	70	5	037	76	69	7		NW. ditto.	S. cloudy.	950
9	076	70	66	4	24,989	77	70	7		S. ditto.	W. ditto.	645
10	092	74	68	6	965	75	70	5		W. ditto.	SW. rain.	066
11	24,973	75	68	7	917	76	69	7		S. ditto.	SW. ditto.	
12	957	76	70	6	934	77	66	11		SW. ditto.	W. fair.	173
13	25,109	76	66	10	25,086	78	66	12		N. clear.	W. ditto.	
14	234	74	67	7	189	76	67	9		W. ditto.	W. ditto.	
15	314	74	68	6	200	77	70	7		W. ditto.	W. ditto.	
16	223	72	68	4	102	74	68	6		SE. rain.	E. cloudy.	519
17	088	73	69	4	010	77	72	5		E. calm.	NW. ditto.	870
18	219	71	67	4	166	77	69	8		SE. rain.	N. fine.	890
19	235	72	68	4	139	76	70	6		S. fair.	W. ditto.	1,384
20	166	74	69	5	114	74	70	4		S. ditto.	SE. rain.	955
21	163	72	68	4	104	74	70	4		S. ditto.	SW. ditto.	606
22	202	74	70	4	131	74	70	4		SW. ditto.	SW. ditto.	200
23	238	74	69	5	146	77	71	6		SW. ditto.	W. fine.	
24	200	74	70	4	079	79	72	7		W. ditto.	SE. rain.	1,740
25	162	74	69	5	071	79	70	9		W. ditto.	SW. fine.	
26	156	74	69	5	095	80	70	10		SW. ditto.	SW. rain.	1,384
27	186	74	69	5	089	75	70	5		W. cloudy.	SE. ditto.	346
28	162	74	69	5	092	77	71	6		W. ditto.	SW. ditto.	259
29	169	75	70	5	084	77	71	6		SW. ditto.	SW. fine.	
30	192	74	70	4	106	78	70	8		SW. ditto.	SW. ditto.	
31	139	75	69	6	078	74	70	4		W. ditto.	SW. rain.	173
Mean,	25,162*	74	69	5	24,964†	77	70	7				13288
Aug. 1	25,136	70	67	3	25,080	73	68	5		SW. rain.	SW. rain.	1,730
2	164	73	68	5	099	71	68	3		SW. fair.	SW. ditto.	
3	212	73	69	4	124	73	70	3		W. ditto.	SW. fair.	1,384
4	186	74	69	5	112	73	70	3		SW. ditto.	SW. rain.	346
5	212	74	69	5	154	73	69	4		SW. ditto.	SW. ditto.	259
6	210	74	69	5	144	73	68	5		SE. rain.	W. fair.	519
7	202	70	68	2	140	73	69	4		SE. ditto.	S. cloudy.	446
8	262	70	67	3	216	70	68	2		SE. ditto.	SE. rain.	346
9	263	72	68	4	202	74	70	4		SW. fair.	SE. ditto.	346
10	289	72	67	5	292	77	71	6		W. ditto.	W. fair.	
11	278	74	69	5	183	80	72	8		W. ditto.	W. ditto.	
12	305	75	70	5	234	77	72	5		W. ditto.	W. ditto.	
13	291	75	70	5	294	73	70	3		W. ditto.	SW. rain.	
14	234	73	70	3	154	73	70	3		S. rain.	SW. ditto.	1,730
15	178	73	70	3	164	73	70	3		W. fair.	SW. ditto.	
16	223	71	68	3	181	71	69	3		S. rain.	SW. ditto.	1,211
17	257	72	67	5	199	71	68	3		S. fair.	SW. fair.	
18	249	71	66	5	164	78	70	8		W. ditto.	SW. ditto.	259
19	254	73	68	5	182	78	70	8		W. ditto.	W. ditto.	692
20	252	70	68	2	169	80	71	9		W. ditto.	W. ditto.	
21	230	73	69	4	156	78	71	7		W. ditto.	W. ditto.	
22	210	74	68	6	121	80	72	8		W. ditto.	S. ditto.	100
29					187	76	69	7			W. ditto.	400
30	323	72	67	5	232	77	70	7		W. ditto.	NW. ditto.	
31	292	73	69	4	195	80	70	10		W. cloudy.	NW. ditto.	200
Mean, 25,237	72.5	68.3	4.2	25,175	75.1	69.7	5.4					9,968

* Mean of Barometer for 29 days, 25,243

† Mean of 27 days, 25,107

Ditto ditto for 2 days, 24,965

Ditto of 4 days, 24,951

Evaporation during July 1,464 inch; fall of rain 13,288 inches.

Evaporation during August, 1 inch; total rain 9,968 inches only.

VII.—*Proceedings of the Asiatic Society.**Wednesday Evening, the 1st November, 1837.*

H. T. PRINSEP, Esq., Vice-President, in the chair.

T. H. MADDOCK, Esq. C. S., Dr. THEODORE CANTOR, C. TUCKER, Esq. and W. KERR EWART, Esq. proposed at the last meeting, were ballotted for, and duly elected members of the Society.

JOSEPH WILLIS, Esq. was proposed by the Secretary, seconded by Dr. WALLICH.

Dr. COLIN JOHN MACDONALD, proposed by ditto, seconded by Mr. W. ADAM.

Major IRVINE, Engineers, proposed by ditto, seconded by Mr. H. T. PRINSEP.

Capt. H. DRUMMOND, 3rd Cavalry, proposed by Mr. W. CRACROFT, seconded by the Secretary.

Nawáb JABAR KHAN, proposed by Mr. E. STIRLING, seconded by the chairman as an honorary member—referred to the Committee of Papers.

Letters from Dr. MCPHERSON, Major OUSELEY, Dr. SPILSBURY, and Lieut. E. CONOLLY, acknowledged their election.

Read, letters from the Secretaries of the Bordeaux Academie Royale, the Geological Society, the Royal Irish Academy, the Antiquarian Society, the Royal Institution, and from Professor FRANK, of Munich, acknowledging receipt of the Society's publications.

Read the following letter from the Secretary to the Asiatic Society of Paris in reply to the Society's address of

A Monsieur J. PRINSEP, Esq. *Sécrétaire de la Société Asiatique du Bengale.*
Monsieur le Secrétaire,

Le conseil me charge de vous faire connaître que la Société Asiatique de Paris a reçu la lettre que Monsieur le très honorable Président de la Société du Bengale et M. le Secrétaire ont bien voulu nous adresser en réponse à l'offre que la Société Asiatique de Paris avait fait à la Société du Bengale d'être un des intermédiaires pour la vente des ouvrages sanscrits aux quels le gouvernement avait refusé de continuer ses encouragements, et dont la Société du Bengale avait entrepris l'achèvement. Le conseil a été vivement touché des expressions de sympathie et d'estime dont la Société dont vous êtes le digne organe a bien voulu se servir à l'égard de la Société Asiatique de Paris, et il me charge de vous prier de vouloir bien en exprimer à votre illustre compagnie nos remerciements les plus sincères. Le conseil est fier de l'empressement avec lequel la Société du Bengale a bien voulu recevoir ses offres, et il éprouve le besoin de donner à ce corps célèbre les assurances les plus vives du désir qu'il éprouve de faire, pour le succès des plans arrêtés par la Société du Bengale tout ce qui est en son pouvoir. Veuillez être assez bon, Monsieur le Secrétaire, pour renouveler à la Société Asiatique du Bengale l'expression de ces sentiments, et pour recevoir en même temps l'assurance des sentiments de véritable estime,

avec les quels j'ai l'honneur d'être

Votre très humble et très obeissant Serviteur,

EUGENE BURNOUF.

Paris, le 12 Juin, 1837.

The Secretary read a reply from M. CSOMA KÖRÖSI to the announcement of the Society's desire to confer upon him the office of librarian.

Mr. CSOMA expresses his sense of the high honor done him, and states his intention of immediately proceeding to Calcutta where he will give a definitive answer.

Read extract of a letter from Dr. ROYLE, Secretary to the Geological Society, transmitting under charge of Captain H. DRUMMOND, the gold

Wollaston medals awarded to Dr. HUGH FALCONER and Captain P. T. CAUTLEY, for their fossil discoveries in the *Siwālik* range.

Professor ROYLE was induced to send these tokens of the approbation of the Geological Society (of which he has recently been nominated an office-bearer), thinking his associates in the Asiatic Society would like to see them ; but more particularly because the excellent paper on the *Sivatherium* was first made public in their Researches, and it would be the best proof of the interest taken by the scientific at home in the novel and interesting discoveries in which so many members of the Society have been successfully engaged within the last four years.

Dr. ROYLE quoted the following extract from Mr. LYELL'S address delivered at the Anniversary Meeting of the Geological Society on the 17th February, 1837.

[The opening of the address presenting the medals was published in our July No.]

ORGANIC REMAINS.

"Gentlemen, you have been already informed that the Council have this year awarded two Wollaston medals, one to Captain PROBY CAUTLEY of the Bengal Artillery, and the other to Dr. HUGH FALCONER, Superintendent of the Botanic Garden at Saharunpore, for their researches in the geology of India, and more particularly their discovery of many fossil remains of extinct quadrupeds at the southern foot of the *Himālaya* mountains." At our last Anniversary I took occasion to acknowledge a magnificent present, consisting of duplicates of these fossils, which the Society had received from Captain CAUTLEY, and since that time other donations of great value have been transmitted by him to our museum. These Indian fossil bones belong to extinct species of herbivorous and carnivorous mammalia, and to reptiles of the genera crocodile, gavial, emys, and trionyx, and to several species of fish, with which shells of fresh-water genera are associated, the whole being entombed in a formation of sandstone, conglomerate, marl, and clay, in inclined stratification, composing a range of hills called the *Siwālik*, between the rivers Sutledge and Ganges. These hills rise to the height of from 500 to 1,000 feet above the adjacent plains, some of the loftiest peaks being 3,000 feet above the level of the sea.

"When Captain CAUTLEY and Dr. FALCONER first discovered these remarkable remains their curiosity was awakened, and they felt convinced of their great scientific value ; but they were not versed in fossil osteology, and being stationed on the remote confines of our Indian possessions, they were far distant from any living authorities or books on comparative anatomy to which they could refer. The manner in which they overcame these disadvantages, and the enthusiasm with which they continued for years to prosecute their researches when thus isolated from the scientific world is truly admirable. Dr. Royle has permitted me to read a part of their correspondence with him when they were exploring the *Siwālik* mountains, and I can bear witness to their extraordinary energy and perseverance. From time to time they earnestly requested that Cuvier's works on osteology might be sent out to them, and expressed their disappointment when, from various accidents, these volumes failed to arrive. The delay perhaps was fortunate, for being thrown entirely upon their own resources, they soon found a museum of comparative anatomy in the surrounding plains, hills, and jungles, where they slew the wild tigers, buffaloes, antelopes, and other Indian quadrupeds, of which they preserved the skeletons, besides obtaining specimens of all the genera of reptiles which inhabited that region. They were compelled to see and think for themselves while comparing and discriminating the different recent and fossil bones, and reasoning on the laws of comparative osteology, till at length they were fully prepared to appreciate the lessons which they were taught by the works of Cuvier. In the course of their labours they have ascertained the existence of the elephant, mastodon, rhinoceros, hippopotamus, ox, buffalo, elk, antelope, deer, and other herbivorous genera, besides several canine and feline carnivora. On some of these Dr. FALCONER and Captain CAUTLEY have each written separate and independent memoirs. Captain CAUTLEY, for example, is the author of an article in the *Journal of the Asiatic Society*, in which he shows that two of the species of mastodon described by Mr. CLIFT are, in fact, one, the supposed differ-

ence in character having been drawn from the teeth of the young and adult of the same species. I ought to remind you that this same gentleman was the discoverer, in 1833, of the Indian *Herculaneum* or buried town near Behat, north of Seharanpore, which he found seventeen feet below the surface of the country when directing the excavation of the Doab Canal*.

"But I ought more particularly to invite your attention to the joint paper by Dr. FALCONER and Captain CAUTLEY on the *Sivatherium*, a new and extraordinary species of mammalia, which they have minutely described and figured, offering at the same time many profound speculations on its probable anatomical relations. The characters of this genus are drawn from a head almost complete, found at first enveloped in a mass of hard stone, which had lain as a boulder in a water-course, but after much labour the covering of stone was successfully removed, and the huge head now stands out with its two horns in relief, the nasal bones being projected in a free arch, and the molars on both sides of the jaw being singularly perfect. This individual must have approached the elephant in size. The genus *Sivatherium*, say the authors, is the more interesting, as helping to fill up the important blank which has always intervened between the ruminant and pachydermatous quadrupeds, for it combines the teeth and horns of a ruminant, with the lip, face, and probably proboscis of a pachyderm. They also observe, that the extinct mammiferous genera of Cuvier were all confined to the *Pachydermata*, and no remarkable deviation from existing types had been noticed by him among fossil ruminants, whereas the *Sivatherium* holds a perfectly isolated position, like the giraffe and the camels, being widely remote from any other type."

Resolved, that due acknowledgments be addressed to the Geological Society for their courtesy in entrusting the Asiatic Society with the honorary medals awarded to two of their associates, and that they be immediately forwarded with appropriate congratulations to Seharanpur.

The Right Honorable Lord AUCKLAND, Patron, addressed to the Society's attention the following communication just received from the Royal Asiatic Society, confident that the Society would omit no means of giving effect to the objects with which they had been forwarded.

"The Royal Asiatic Society of Great Britain and Ireland, 14, Grafton Street, Bond Street ;

MY LORD,

London, 11th of May, 1837.

The Committee of Agriculture and Commerce of this Society, having had before them certain specimens of Lichens used in dyeing, and being informed that several species are now employed in India for that purpose, and that many more would probably be elicited by a close investigation, and an accurate knowledge of the requirements of the trade, which has been much checked by the short supply, and high price of the best sorts used, I am requested by the Committee to transmit to your Lordship the accompanying specimens of Lichens, with bottles of the ammoniacal liquor used in extracting the color, and of the extracted color; and to enclose fifty copies of the first day's proceedings of the Committee, which contain directions for ascertaining the most useful sorts of Lichens, and for using the liquor as a test of their quality. I am also requested to solicit that such measures may be adopted as may appear to your Lordship to be expedient to diffuse amongst those to whom it is likely to be useful such an acquaintanceship with the subject as may tend to advance the views of the Committee.

As the Committee are impressed with the conviction that their views of general utility are fully shared by your Lordship, they feel it unnecessary to offer any

* Journal of Asiatic Society, Nos. xxv. and xxix. 1834. Principles of Geology, 4th and subsequent editions. See Index, Behat.

apology for the trouble which may be occasioned in furthering a measure calculated to lead to the improvement of our commerce, and to be of general advantage.

I have the honor to be,
&c. &c.

H. HARKNESS, *Secretary*.

To the Right Honorable Lord AUCKLAND, G. C. B., Governor-General of India."

Mr. VISGER's specimens, deposited in the museum, are labelled as follows :

	Value per ton.		Value per ton.
1. Canary orchilla,	£250 to 350	10. Canary rock moss, ...	80 to 90
2. Cape de Verde ditto, ..	200 to 300	11. Sardinian ditto,	70 to 90
3. West Island ditto,	150 to 230	12. Pustulatus ditto,	20 to 40
4. Madeira ditto,	100 to 150	13. Tartarous moss,	20 to 40
5. Africa ditto,	80 to 130	21. Useless lichen, liable to be	
6. South America do. ..	80 to 120	mistaken for Nos.	1 or 9
7. Sardinian ditto,	30 to 45	22. Lichen valueless ditto, ..	12
8. Cape of Good Hope do.	20	23. Bad canary moss ditto, ..	10
9. English ditto,	no value.		

"*The Good* has a nearly white powder on its surface, towards the centre ; the under surface is of a gray color, and is not hairy ; if wetted it does not turn of an orange color ; its edges are flat and thin.

"*The Bad* has no mealy white powder on its surface ; its under side is hairy, and blacker than the good ; its edges are usually more or less knobbed, and on being wetted it generally becomes of an orange color.

"No. 24, contains a mixed sample of good and bad, which has been wetted with water.

"The useless mosses greatly outnumber the useful, and vary from each other, in some instances, by such slight shades of difference, that the above specimens of them can serve little more than to call minute attention to the subject. A test for the discovery of color is therefore necessary.

"*Test*.—Take liquor ammoniæ, very much diluted with water, but strong enough to retain a powerfully-pungent smell—half-fill a phial bottle with the same, then add of the lichen (being broken up to a convenient size), so much as will lightly fill up the liquor, so that the whole may be readily stirred about. Care must be taken to leave at least one-third of the bottle for air. The bottle must be kept corked, but be frequently opened, and the contents stirred with a small stick. The color will begin to exhibit itself in a few hours, and the more rapidly in proportion to the warmth of the place in which it is kept ; but the heat should not exceed 130° Fahrenheit. A piece of white silk placed near the surface of the fluid will show the color before it would otherwise be perceptible. This test will only serve to show where color exists, but will not develop it to its fullest extent.

"*Localities*.—The good sorts are generally found in rocky or stony districts, or where dry stone walls abound ; in the neighbourhood of the sea,—or if distant from the sea, in places exposed to sea breezes. The more valuable are met with in volcanic islands. My own experience has been principally in the Canaries, where I find the more arid the situation, the better the quality of the lichens. When the land is high and humid, the useless sorts alone are met with. In dry places near the sea, there are only the good sorts ; and there is generally a belt between the two, in which both good and bad are found on the same stones, and not unfrequently overrunning each other.

"There is with the samples a small bottle of ammoniacal liquor, of the strength suited for test : and also a small bottle of the color to be produced."

Resolved, that five copies of the "Proceedings" be communicated to the Agricultural Society ; and that others be sent to any members of the Society who may be in a position to collect specimens of Indian mosses for trial and transmission home.

The Secretary brought up the following

Report of the Committee of Papers on the Museum reference of the 6th Sept. 1837.

The question submitted to our consideration on the present occasion is, simply, how we may best dispose of the Government grant of 200 rupees per mensem, (which it has been resolved to accept,) towards the maintenance and improvement of the Society's museum? Whether a successor to Dr. PEARSON shall be appointed, or any other mode of superintendence adopted?

The following considerations have induced us to recommend that the Curatorship shall not be filled up for the present.

The objects that had accumulated in the museum prior to Dr. PEARSON'S nomination having been once arranged by him, there will evidently be little to employ a successor, unless additions could be made on an enlarged scale through purchase or otherwise, for which sufficient funds do not exist.

On the other hand, by employing the money now granted us in purchasing and collecting specimens for the due preservation of which our present establishment is sufficient, we shall in a year or two have amassed materials to give full occupation to a professional superintendent, whom we may then appoint on our former scale, should not the Government at home in the mean time place the museum on a more comprehensive footing. We therefore propose that the 200 rupees be carried to the general account, and that in consideration of this accession to our resources, opportunities be sought of adding to our museum by purchase; and of promoting physical or antiquarian research by such other means as may present themselves from time to time. We would in the mean time place the museum under a special Committee of three annual members subject to re-election, as in the Committee of Papers, and three ex-officio members, viz. one vice-president, the secretary and the librarian. We would further suggest—

That this Committee should hold meetings at the rooms not less than once in the week; that their orders should be carried into effect, and their proceedings recorded by the Secretary as in the Committee of Papers; and that all expenditure should require audit from the latter Committee with exception of the ordinary contingent, which may be fixed at 100 rupees per mensem.

That this Committee should give in an annual report of the progress of the museum, at the anniversary meeting in January, and that they should be entrusted with a general discretion for the disposal and exchange of duplicate specimens for the benefit of the museum.

For the Committee of Papers,

*Asiatic Society's Rooms, }
20th Sept. 1837. }*

J. PRINSEP, Secretary.

Proposed by the Chairman, seconded by Mr. CRACROFT, and resolved, That the Report be adopted in all its provisions; and that three gentlemen be elected to act with the Secretary and librarian as a Committee for superintending the museum.

Dr. CORBYN spoke at some length in favor of renewing the curator's appointment. He concluded by moving the postponement of the question until a better meeting could be assembled, which was negatived.

It was then moved by the Secretary, seconded by Mr. HARE, and resolved, that Mr. WILLIAM CRACROFT, Dr. G. EVANS, and Dr. McCLELLAND, be requested to act as the museum Committee.

Dr. EVANS and Mr. CRACROFT being present signified their acceptance of the office.

Library.

The following works were presented on the part of the Royal Academy of Bordeaux:

"Mon portefeuille," a collection of drawings (lithographed for private presentation) of Roman Statues and antiquities, by M. P. LACOUR, Member of the Academy, Corresponding member of the Institution, &c.

Essai sur les Hiéroglyphes Egyptiens, par P. LACOUR, &c.

Procès-verbal des séances publique de l' Academie Royale des Sciences, Belles-lettres et arts de Bordeaux, 1836.

On the part of the authors.

Institutiones linguae Præcitiæ, by Dr. CHRISTIANUS LASSEN, Professor at Bonn ; 2 fasciculi.

Die altpersischen keil-inschriften von Persepolis, entzifferung des alphabets und erklärung des Inhalts, von Dr. CHRISTIAN LASSEN.

Analysis and Review of the Ricardo, or new school of political economy, by Major W. H. SLEEMAN.

Polymetrical tables prepared for the use of the Post Office—by Captain T. Taylor, Madras Cavalry.

On the part of the Societies.

Transactions of the Royal Irish Academy, Vol. XVII.

Journal of the Proceedings of do. Nos. 1, 2, 3.

Journal Asiatique Nos. 7, 8 new series, of the Asiatic Society of Paris.

Lardner's Steam Communication viâ the Red Sea, reprinted in Calcutta—by the Steam Committee.

Meteorological Register, from the Surveyor General.

From the booksellers.

Lardner's Cabinet Cyclopaedia—Ireland, vol. II.

Antiquities, Literature.

[Brought forward from the adjourned meeting of the 4th October.]

Major PEW forwarded the promised facsimile of the inscription on the broken *Delhi Lât*, now in Mr. FRASER's grounds.

The secretary stated that though much mutilated there was not a letter in this facsimile of which he could not assign the exact counterpart in the Feroz lât. It had enabled him to correct a few but very few readings in the translated version while it confirmed some that had been deemed doubtful.

Read a letter from Captain A. BURNES, dated *Camp, Duha* on the river of *Cabul*, 5th September, forwarding :

No. 1. The facsimile of the Sanskrit inscription at *Hând* 20 miles above *Attok* alluded to in M. COURT's memoir on *Taxila* (Journ. V. 482). The original is lodged at *Peshawar* awaiting the Society's orders as to its disposal.

No. 2. Inscription under a broken idol at *Hând*.

Nos. 3, 4. Figures on marble and stone fragments at the same place.

No. 5. A view of the Khyber tope, not yet opened,

No. 6. A mineral resinous jet from the *Khattak* country south of *Peshawar*.

[See notice and plates of the inscription.]

MANATON OMMANNEY, Esq. C. S. forwarded copy of a Sanskrit inscription on three plates deposited in a temple at *Multaye* near the source of the *Tapti* river.

[See the present number, page 869.]

Dr. ALEXANDER BURN, transmitted facsimiles of the contents of two copper-plates found in the town of *Kaira* (*Gujerat*) in the same character as those deciphered by Mr. WATHEN in 1835.

They relate also to the *Silāditya* dynasty, but as Dr. BURN has offered to send the plates themselves it will be better to await their arrival before attempting to read their contents.

Baboo CONOYLAL TAGORE sent for exhibition to the society a copper-plate in excellent preservation lately dug up in the chur land of a *Zemindaree* belonging to him in pergunnah *Edilpore*, zila *Backergunj*.

This grant, which is now being transcribed gives an additional name to the list of the *Beldi Sena* dynasty of *Gaur*.

A letter was read from T. CHURCH, Esq, dated *Singapur*, 15th August, 1837, presenting to the Society specimens of some ancient tin coins discovered up at that place.

These coins hardly appear to be of great antiquity. They have a lion on one side crest-fashion, typical doubtless of the name of the settlement *Sinhapur*, the city of the lion; and on the reverse what may be intended for a cornucopia or a sceptre. They are of tin and in high relief, and rough on the edges. About 800 of them were dug up by a party of convicts in making a road five miles from the town. The earthen vessel containing them had apparently been glazed and was of a very common shape, it was buried about two feet in marshy ground in a spot until recently covered with dense jungle.

Dr. T. CANTOR presented some Scandinavian antiquities of copper and brass,—a knife, an arrow head, pincers and a key.

"They are from different Danish provinces, and were extracted by myself from sepulchral urns containing bones and ashes of the dead, which the heathen Scandinavii used to deposit in huge tumuli. Antiquarians date them about 400 of the Christian era. The key is similar to that used by the Chinese."

The Rev. Dr. MILL presented two stone slabs for the museum, which had been last year brought to him from the west of India and the Red Sea by Captain ROCHE.

"No. 1 is an armorial shield, taken from the principal altar in a ruined Portuguese church on the top of Trombay hill, Salsette island, one of the first Portuguese settlements. The date of the slab was broken off on removal down the hill. The words were to the purport, "Glory to God, 1641."

"The other stone was brought by an officer of the Indian Navy from the Red Sea; it was found in one of the numerous ruined cities on the Egyptian shore; it was supposed to be a grave-stone upwards of 300 years old."—(See drawing and note in the present number.)

Mr. W. H. WATSEN forwarded on the part of Lieut. POSTANS, an account of the Jain temple at *Badrasir*, and the ruins of *Badranaguri* in the province of *Cutch*, with drawing of the image and plan of the temple.

Mr. T. WILKINSON brought to the Society's notice a translation of the elements of Euclid into Sanskrit in the time of *rāja Siwai Jaya Sinh* of *Jaipur* in 1699, called the *Rekha gamitu*.

[Will be published in next month's Journal.]

Colonel STACY drew attention to a coin lately procured by him from the Panjab, uniting the type of the Indo-Scythic series with that of the Indo-Musalmani's of *Kaikobad*.

It was with much regret announced to the meeting that Colonel STACY had been robbed of a great part of his collection of coins including the unique *Amyntas*, and all his *Bactrians*, and 60 gold *Gupta* coins of *Canouj*!

Mr. D. LISTON transmitted two servitude bonds granted by cultivators in the *Gorakhpur* district, shewing personal bondage to be there practised openly at the present day.

Read a letter from Lieutenant KIRTON, 6th Regt, forwarding two manuscript journals kept by himself on a march with his regiment to *Cuttack*, and then to the *Boad* and *Gumsur* country.

These Journals contain minute and beautifully executed drawings of all the temples and antiquities met with on his route, with all the information on every subject he was enabled to pick up. His visit to *Rhobaneswar* and to the *Khangiri* hills have formed the subject of separate memoirs.

Physical.

Mr. Secretary MANGLES presented on the part of the Right Honorable the Governor of Bengal, a copy of Dr. RICHARDSON's journal of his late visit to the *Shan* frontier in *Moulmein*, in two parts.

Mr. JULES DES JARDINS presented 7th Report and *Résumé* of Meteorological observations made by the Natural History Society of the *Mauritius*.

Dr. W. BLAND gave a note on Mr. HODGSON's description of the *Nipal* woodpeckers.

Colonel McLEOD brought to the meeting several more fragments of fossil bone from the fort boring now at 423 feet.

One a small caudal vertebra of a lacerta animal? the rest testudinous. The tankar pebbles and quartz and felspar gravel accompanying them are increasing in size and bear the appearance of having been rolled.

Mr. C. B. GREENTAW presented on the part of Mr. ALFRED BOND, Master Attendant at *Balasore*, a series of tide registers at *Bulramghari* in full for the year, 1834.

Read a letter from Dr. T. CANTOR, presenting a catalogue of serpents and fish in the Society's museum.

Resolved that especial thanks be returned to Dr. CANTOR for the valuable service he has rendered to the Society in arranging and classifying these objects.

The Secretary proposed taking advantage of Dr. CANTOR's departure for England by the *Perfect*, to request his kindness in conveying a case of the duplicates of the Society's collection of snakes for presentation to the museum of the Honorable Company.

He would also recommend that one of the elephants and rhinoceros' skulls should be entrusted to Dr. CANTOR with a view of presentation to any museum whence he may be able to obtain in exchange some osteological specimens for our museum, not procurable in India.

Dr. CANTOR had kindly undertaken to convey a series of our fluviatile shells to Professor VON DEM BÜSCH of *Bremen* and other parcels for the continent.

These recommendations were adopted.

The Secretary obtained sanction for purchase of 31 objects of natural history prepared by M. MONTEIRO and varnished—at 31 rupees.

Mr. SHAW, 3rd officer of the *Ernaud* presented a tetradon, a remosa, and some insects from the Persian Gulf.

Dr. McCOSH presented the skeleton of a Tapir which he had commissioned from *Malacca*.

The skeleton had unfortunately been ruined by an unskilful hand—the whole animal having been chopped up butcher-wise to be packed in a cask—in spirits—but the head and some bones were uninjured.

Read the following letter from Lieut. THOMAS HUTTON, 37th N. I. dated Simla, 27th August and 4th September.

Simla, 27th August, 1837.

SIR,

At a time when the attention of the Scientific bodies of Europe, is turned to the valuable discoveries of our fossilists in the Sub-Himalayan ranges, it may not be thought impertinent in me, to suggest that the discovery made some years

since by the late Dr. GERARD in the *Spiti* valley, and other places in the interior of these mountains might advantageously be followed up, by farther and more complete research.

Little, save the existence of these fossil beds has hitherto been noted, and the rigorous climate in which they are found, renders it more than probable that few if any subsequent travellers will be inclined to venture into those inhospitable regions, where the Thermometer, in the month of October, stood, in the morning, (as noted in the Dr.'s memoranda), at 16°, 15°, and even 10°.

Through the liberality of Captain P. GERARD residing at *Simla*, I have had an opportunity of perusing the Dr.'s memoranda, and am of opinion that research in the localities he notes down, would give to science some valuable additional information on the subject of these interesting deposits of the antediluvian world.

Subsequent to Dr. GERARD's discovery,—and wholly dependent on that gentleman for his information,—M. JACQUEMONT I believe visited the valley of the *Spiti*,—but whether he succeeded in penetrating to the fossil locality, or was deterred by the rigours of the climate, is unknown.

Shall we, however, allow the riches of our dominions to be brought to light and reaped by Foreign Societies?

They send out travellers to glean in the cause of science, through every clime, while we alone, the richest nation of them all, sit idly by and watch their progress.

I had contemplated an expedition to *Spiti*, this year, but straitened circumstances and family affairs, have obliged me with reluctance to relinquish the undertaking.

Should the Society deem the Dr.'s discovery worthy of being followed up, I would humbly offer under their patronage to undertake the trip, the expenses of which, if necessary, I would gladly share.

In those climates the best and I may say only season for successful research would be during the summer months, i. e. from May until the end of September or October, and I should calculate the monthly cost at about one hundred and fifty rupees (150 Rs.)

Dr. GERARD notes the bed of marine fossils, or solid shell rock to be no less than one mile in depth, while loose fossils of various species were lying about on the summits of the ridges at an altitude of 16,000 ft. above the sea.

He had, at the time of this discovery, no leisure to prosecute research, as the season was too far advanced, and his health too much impaired to admit of his exposing himself longer to the bitter cold which was fast setting in,—nor did the Dr.'s pursuits or knowledge of the subject permit his making the most of the discovery.

Other branches of the Natural History of these Hills, might at the same time be pursued with advantage, and according to the Dr.'s memoranda, there are many objects of value and interest in this department to be met with.

Should the Society be inclined to lend a favorable ear to my suggestion, nothing would be requisite but the permission of the Governor General for my being appointed to the undertaking, and from the anxiety His Lordship has ever shown, to forward Scientific Research, little doubt need be entertained as to the result, if solicited to that effect by the Asiatic Society.

I have broached the subject thus early in order that every preparation may be made for the successful accomplishment of the undertaking.

I have the honor to be, &c. &c.

THOMAS HUTTON, Lt. 37th Regt. N. I.

To JAMES PRINSEP, Esq. Sec. As. Soc.

Resolved, that the Society feels much indebted to Lieut. HUTTON for his disinterested proposal, and will have great pleasure in furthering his plan for the thorough exploration of the *Spiti* valley, and the neighbouring regions of the *Himálaya*, by placing one thousand rupees at his disposal for this object, provided he is enabled to prosecute the journey; and on the conditions suggested by himself, that the objects of natural history recent and fossil collected in the trip shall be deposited in the Society's Museum.

Monsieur FONTANIER, French Consul at *Bussora*, forwarded under charge of Capt. EALES, Ship *John Adam*, various objects of natural history from the Persian Gulf.

1. Mineral specimens from the island of *Ormuz*. Shell concrete, or grès coquillier, ferruginous and selenitous sandstone and madreporite.

2. Zoophytes and snakes of several species from *Bussora*; also a curious *stellion* or *gako* (*hemidactylus tiktikia*) with a note description of them.

Mr. D. McLEOD presented a series of rock specimens from the *Sutpora* range commencing with *Seoni Chapara*—the specimens are numbered with reference to a map of the district accompanying.

Dr. Mc'LELLAND submitted a descriptive catalogue of the zoological specimens collected by himself in the late tour in Assam, together with copies of his ornithological drawings, of which the originals, about 130 in number, have been transmitted through Government to the Hon'ble Court of Directors.

The fossils presented by Mr. W. DAWE of the Delhi Canal Establishment had arrived and were much admired. The following is the list of them furnished by Mr. DAWE.

No. of Specimen.	Names of Specimens as supposed to be
1	A tortoise, (a very perfect specimen of <i>trionyx</i> .)
2	A fragment of humerus of <i>Mastodon</i> .
3	A ditto of tusk of ditto.
4	to 8 Fragments of jaws of the <i>Mastodon</i> .
9, 10	Vertebra of the <i>Sivatherium</i> .
11	ditto <i>Mastodon</i> .
12	Right lower jaw of the elephant
13	Left lower jaw of the elephant
14	Fragment of the femur of the elephant.
15	Ditto horn of a deer.
16	Ditto horn of a buffalo.
17	Ditto horn of a bullock.
18	Ditto rib of the <i>Mastodon</i> .
19	Ditto upper jaw of the crocodile.
20	Ditto jaw of a small deer.
21, 22, 23	Ditto of bones not recognized.
24	Ditto lower half head of the hippopotamus, (very perfect)
25	Ditto upper half head of the rhinoceros.
26	Ditto lower jaw of the hog.
27	Ditto ditto of the <i>Sivatherium</i> .
28	Ditto ditto of the bear*.
29	Ditto tusk of the hippopotamus.
30	Ditto ditto of the ditto.
31	A tooth of the crocodile.
32	A lower jaw of a shark (supposed to be.)
33	A fragment of the jaw of a horse.
34	A small box containing right half of lower jaw of the hippopotamus dissimilis (vide Journal, No. 53 and note page 293.)
35	A packet containing an assortment of shells.
36	A sample supposed to be a species of coal, with a portion of bitumen.
37, 38	Fragments of upper part of the head of ruminant.
39	Specimen of fossil wood.
40	Fragment lower jaw of small elephant.
41	Lower extremity of radius and ulna, carpal bones attached, of <i>Mastodon</i> .

* This jaw seems to belong to a new animal at least, it has not yet been identified.—Fm.

Meteorological Register, kept at the Assay Office Calcutta, for the Month of October, 1837.

Day of the Month.	Observations at 10 A. M.					Observations at 4 P. M.					Register Ther- mometer extremes.					Wind.	Weather.	
	Baromet. at sea.	New Stand. reduced.	Thermom. in air.	Depression of wet-bulb.	Dew-point. by hyg.	Baromet. at sea.	New Stand. reduced.	Thermom. in air.	Depression of wet-bulb.	Dew-point. by hyg.	Thermom. in air.	Depression of wet-bulb.	Dew-point. by hyg.	Thermom. in air.	Depression of wet-bulb.			
1	29.836	29.799	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
2	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
3	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
4	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
5	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
6	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
7	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
8	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
9	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
10	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
11	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
12	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
13	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
14	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
15	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
16	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
17	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
18	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
19	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
20	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
21	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
22	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
23	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
24	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
25	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
26	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
27	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
28	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
29	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
30	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
31	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.
Mean.	29.835	29.798	85.6	7.2	6.6	29.894	29.857	83.7	10.7	9.2	79.9	10.7	9.2	79.9	10.7	N. E.	calm.	fine.

There was a storm in the bay on the 3rd, 6th which caused a few rains. The rains this year unusually light, especially in the N. W. Provinces.

JOURNAL

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I.—*Journal of a Trip to the Burenda Pass in 1836. By Lieut. THOMAS HUTTON, 37th Regiment, Native Infantry.*

On the 22nd of September, 1836, I started from *Simla*, which averages an elevation of 7,200 feet above sea level, in company with a small party of friends, on a trip to the *Burenda Pass*, with the intention of crossing into *Kanāwar*. The road from *Simla* to the top of *Mahāssū*, is a pretty steep ascent for nearly the whole way, but the scenery, particularly in the forest, is very beautiful and reminds one much of the grounds around a gentleman's country seat at home.

Several species of pines and thorny-leaved oaks, intermixed with large plane trees and various others, compose the forest. Black currant bushes and raspberries, both yellow and red, are plentiful, as also the blackberry or bramble. The fruit of the former is much sought after by the residents at *Simla*, to make preserves with: wild strawberries are also abundant and richly flavoured.

Flowers^{*1} of various kinds are scattered over the more open parts of the forest, and flitting over them may be seen numerous butterflies, many of which are common to Britain and continental *Europe*. Among others I recognised and captured the beautiful 'swallow-tail'd'² and 'tortoise-shell' butterflies³;—the caterpillar of the latter, being the same as that of *Europe*, and like it feeding on the nettle.

The 'painted lady'⁴ is also abundant, as well as the large⁵ and small 'cabbage butterflies'.⁶ 'The black-veined white'⁷ is among the most numerous, and many of the beautiful little species belonging to the Genus *Polyommatus*.

* See notes at the end.

Here also beneath the decaying trunk of fallen trees I discovered in abundance some new species of land snails* belonging to the genera, *nanina*, and *bulinus*.

Pheasants are plentiful down the *khads*, but it is hard work hunting for them.

The *plass* or *pucas* pheasant^s and another bird called, the *khalijs*^s pheasant, are the commonest, but the *monál*^s is to be met with towards the latter end of autumn and during the winter season, as also the woodcock^s; indeed one of the latter birds, I saw flushed in the month of August, and a brace were seen at *Simla* this year in November.

Wild hogs are abundant in the deep glens, where they shelter themselves all day, and at night sally forth to regale on the grain fields, much to the annoyance of the farmers;—they also visit the higher and more open parts of the forest where they turn up the ground in search of aromatic roots, &c.

Bears*, too, are numerous in the rocky glens, arriving from the colder parts of the hills in the autumn and staying during the winter, —retiring again to the interior about April, as the weather becomes hotter.

Besides these, many other animals are inhabitants of this forest, such as the leopard^s, leopard cat^s, the hill fox^s, and troops of lun-goors^s, as also the musk deer^s and flying squirrel^s.

The former animal is seldom seen except at night when it prowls about the sheep-folds, and is often as much the terror and pest of the poor highland villagers, as the more formidable tiger is to the inhabitants of the plains.

At *Simla* where the leopard is by no means scarce, it is necessary at nightfall to shut up the dogs, or they would, invariably sooner or later, as indeed numbers do, fall victims to the voracity of this prowling savage. Even in open day, dogs are frequently snatched up by this animal, when hunting along the wooded banks, only a few yards from their masters. Instances are even on record of their entering houses at night when the doors have been incautiously left open.

Large tracts of the forest of the *Mahássú* have of late years been cleared for the purpose of planting potatoes, which thrive well on sloping grounds and are cultivated to a great extent, vast quantities being annually sent to the plains for sale.

The magnificent timber which once abounded here is fast falling beneath the woodman's axe, and it is to be feared that ere long, the

* *Ursus Thibetanus*.

so much vaunted beauty of this forest, will have passed away. The demand for good timber, for the purposes of building, since *Simla* became a resort for invalids, has been so great, that the needy and money-loving Ránas, have turned the gigantic beauties of the forest, to account, and many places are beginning to look quite bare and naked from the constant drain upon them.

It is more than probable, if this destruction continues, that in a few years the forest will be ruined; for it is a curious and melancholy fact, that but very few young trees are springing up to supply the places of the parent stock.

Many fine trees are also destroyed by the practice of setting fire to the jangal grass, for the turpentine which exudes so plentifully from the pine trees, immediately takes fire and the bark of the tree is destroyed at the base. The consequence is that rain finds a lodgment and rots the outer wood, which having become soft is immediately discovered and attacked by insects, and the tree in a short time withers and falls. Hundreds of these trees as also many fine oaks are to be seen in every stage of disease, both standing and fallen, and almost all arising in the first instance from the fire having injured or destroyed the bark around the base.

In this stage, stage-beetles^a, capricorn beetles^a and also the click beetles^a whose larvæ are nourished in decaying trees, are all busy in completing what the fire has commenced, and even a species of snail^a contributes much to the ultimate ruin of the sturdy oak by boring into every hole and crevice and reducing the fibre of the wood to the consistency of moist sawdust.

It is upon such trees that the woodpeckers, in search of insects within, bore innumerable holes, and although they are labouring with the laudable intent of destroying the hidden foe, yet they also in no small degree hasten the decay of the wood, by boring so many fresh inlets for the rain and snow.

It must be remembered however, that these much abused birds never attack a sound and healthy tree, and their share in the destruction of a decaying one, may be forgiven, on the certainty of its being destroyed even without their aid, by the insects already within it.

The highest peak of *Mahitssú* is 9140 feet above the level of the sea; but the *Deví* temple, past which the road runs, is only 9078 feet, after which the road gradually descends for about two miles through the forest to *Fágú*, where there is a small bungalow of one

room, belonging to government, and which is the usual halting-place for travellers, being about twelve miles from *Simla*.

The elevation of the bungalow is 8040 feet.

From this place a road branches off through the *Jubal* country towards the *Chor* mountain, which is one of the lions usually visited by travellers, and attains an elevation of 12,149 feet. The road across the hills to *Masúrí* also lies in the same direction.

At *Fágú* we halted one day and on the 24th September pursued our march towards *Mattiána*, which is the second stage from *Simla* to the cantonment of *Kotgarh*, and where there is another small bungalow of one room. Elevation 8070 feet.

The grassy hills between *Fágú* and *Mattiána* produce during the rains, immense quantities of a species of *orchis*, called by the natives "*salep misrí*," the roots of which are sometimes collected and dried, and afterwards brought to *Simla* or sent to the plains for sale. If care and culture were bestowed upon these plants and the drying of the roots properly attended to, why might not the hill plant equal the famous Persian and Turkish *salep misrí*, which is now sold at such high prices as almost to preclude the possibility of using it? The hill plant grows at *Simla* and is pretty generally diffused over the interior, and as it may be had in almost any quantities, an important and nourishing addition to the diet of infants and invalids might be furnished at a reasonable and even cheap rate.

The road from *Fágú* is seen for miles running along the side of a bare hill, which on one side shuts out the view, while on the other are deep glens with here and there a few houses. It is a long and dreary march of about 14 miles, and as the party I was with were keen sportsmen, we agreed to breakfast at a wood about half-way, and three miles beyond the old fort of *Theog*, which stands on an eminence near the road and is 8013 feet above the sea.

After breakfast we beat the forest for game and found a musk deer and some plass pheasants, as also the hill partridge and the shikárí of the party brought in some *chicórs*⁵.

The whole of this day we walked on leisurely down the *khads* for the two-fold purpose of finding game and avoiding the dreary road to *Mattiána*. In the evening we came to our encamping ground in the bed of the glen below *Mattiána* bungalow, on the banks of a stream, which wound along among the bluff rocks and thickly wooded hills, giving a beautiful and romantic appearance to the scene which is here highly picturesque, the banks of the glen rising some hundreds of feet high on either side, and clothed to the top with trees and brushwood.

Here we found that beautiful little flower, *parochetus communis*, figured in ROYLE's Illustrations. It was growing in profusion among the damp rocks and caves on the banks of the stream. I have since found that it is common also at *Simla*.

In the morning just before daybreak on the 25th we heard the hill blackbirds singing very sweetly from the woods above us. The song is not unlike that of the European blackbird. These beautiful birds commence singing about the middle of autumn and continue their songs throughout the winter and spring, after which they betake themselves to the interior, being autumnal and winter visitants rather than constant residents of the lower hills, although a few may be occasionally met with throughout the year. In the winter season they are found as low down as the vale of *Pinjore*.

At daybreak on the 26th September we ascended a very steep hill towards *Nágkunda*, breakfasting about half-way, by the side of a hill stream and then continuing our journey. On this road are plenty of chicores and a few were shot by the party.

At *Nágkunda* we found two gentlemen from *Simla* who had come thus far to see the beauties of the interior before leaving India for home. In consequence of this rencontre we halted a day and beat the wood for game. Some plass and *khatij* pheasants were killed, and a male musk deer was brought in by one of the shikári.

The bungalow at this place is larger than those of *Fúgú* and *Mattiana*, possessing one large and two small rooms, which afford very comfortable accommodation to travellers. The elevation is 9016 feet.

The scenery from this place is very beautiful.

The cantonment of *Kotgarh* is seen in a slope in the distance, and is much lower than *Nágkunda*, and surrounded by mountains of every shade, from the deepest forest green, to the bare and barren rock, while the long line of eternal snows towers far above them all in the back ground. In the *khads* below the bungalow we found several nut trees with fruit on them, and very similar to filberts in appearance, but all were rotten, and judging from the number of nuts strewed upon the ground, all of which were likewise rotten and were the fruit of the preceding year, I should be inclined to think that few ever ripened. Dr. GERARD mentions having found them rotten in 1818.

The nut tree here grows to a good size, and unlike the hazel bushes of Europe, is really a large tree, springing up some height before the branches spread out, and the trunks of many exceeding a man's body in girth. The tallest trees must have been from 30 to 40 feet high at least.

Flowers of different kinds are here abundant, every open space or grassy hill being studded with various colors; the *anemone discolor*, *parnassia nubicola*, and *potentilla pteropoda* of ROYLE are innumerable, while in the deep glens or *khads*, growing in damp vegetable moulds, a beautiful white species of *cypripedium* is found, as also a very large white lily, which grows to a height of 6 or 7 feet.

Here also we found a fruit resembling a wild quince, but growing on large trees, with leaves very similar to those of the nut trees.

Another fruit was brought us, which in taste was something like the sloe, the stone somewhat resembling that of the little wild cherry of Britain. The tree is tall and at first sight resembles the cherry tree, but the fruit grows on the stalks in a different manner, being placed at unequal distances up a long straight stem. The hill people call the tree *jummoa*, (*jamú*.)

These forests are also well stocked with splendid yew trees and pines of enormous growth. The birch is said by travellers to grow here also, but we were not fortunate enough to see any.

On the afternoon of this day a shower of rain fell and the wind was very cold; the snow evidently falling fast over the snowy range which was very white. The sky black and threatening.

On the 27th after breakfast we started from *Nágkunda* and crossed the top of *Hattú* or *Whartú*, a steep hill in the neighbourhood about 10,656 feet high. From the top of this mountain a splendid view opens upon the traveller, and some of the houses at *Simla* are seen, while the snowy range, in its vast extent is laid open. Here I took some fine specimens of snails* of the genera *nanina* and *bulimus*, among the loose stones and ruins of the old *Gurkha* forts which crest this mountain. The shells of the former genus, far exceed in size, those of the warmer hills of *Mahássa*. Here, also, on the very top of the ruins, I found a solitary plant of *mulgedium manorhizum* in flower, its roots firmly wedged in between the massive stones.

There are a few stone huts on the top of this hill erected by an officer, as a temporary shooting box. After resting awhile and enjoying the fine view, we went down the opposite side of the mountain and a few miles farther on brought us to our encamping ground at a place called *Bagie* beneath a hill crowned with the ruins of an old fort of that name, and a short distance above a village called *Shail*.

From this village excellent coolies are procurable and we got all necessary supplies very easily, the villagers coming into camp with grain, ghee and milk.

Part of the road after leaving *Hattú*, lay through a wood and was frequently interrupted by fallen timber. In the open parts among

beautiful flowers of different kinds and colors, gave a very pleasing effect to the scene. At one part of the road, an otherwise bare rock, was bedecked with numerous plants of *mulgedium manorhizum* of ROYLE, while in the first I gathered the golden flowers of "*corvisartia indica*."

Here again European forms of butterflies presented themselves, sporting among the flowers of the forest. The 'large tortoise-shell' and 'brimstone butterflies,' were recognized, as also the 'marbled white' and two others which appear to be but varieties of the European insects *argynnis aglaia* and *vanessa atalanta*.

Many others peculiar to these hills were also noticed.

Not finding ground to ride over during the latter part of this march some of the party sent back their ponies.

The distance travelled this day was about 12 miles, of which the first five or six were very steep. The elevation of *Bagie* is 9084 feet; the village from which our supplies came is 7400 feet.

Early on the morning of the 28th September. we resumed our march and found the whole way beautifully varied with flowers, chiefly of a species resembling a blue China aster. The road or rather track, lay sometimes through deep and shady woods, every now and then opening out upon grassy hills, at other times leading up over rugged rocks resembling steps, with scarcely room sufficient for our feet; the scenery was indeed beautiful and grand by turns, one while presenting verdant meadows, thickly begemmed with flowers, and bounded by dark woods of various shades, at another time changing to dark and frowning rocks, towering high in wild confusion, like the ruins of some ancient and mighty castle of the fabled giants. In shady places hoar frost was lying thick upon the grass. The path became at length so rugged and unfit for riding over, that we sent back the rest of our ponies and determined to perform the remainder of our trip on foot, which soon proved a case of necessity.

We breakfasted about half-way, on the side of a grassy hill, near a large flock of sheep which were folded beneath a huge overhanging rock, and guarded by several fierce and powerful hill dogs.

Large flocks of sheep are pastured on these open patches, and as the pasture is consumed they are driven on to others, always tended by their sagacious and watchful guardians the dogs, to whom indeed the care of the flock is almost entirely trusted, the men lying idly by or knitting shoes and socks of worsted. When in want of a sheep or lamb we found great difficulty in inducing these people to part with one out of a flock of several hundreds; if we succeeded in

attaining one, it was always lame, sick or past breeding and only fit for our dogs.

The reason is, because the sheep are a great and indeed their only source of profit, and are kept for the sake of the wool which is manufactured into blankets and coarse loocees (*lúts*) and sold or bartered for other necessities.

After breakfast we again pursued our journey over similar ground, and at length halted on the side of another open grassy hill called by the guides *Tútú*, the village of *Thar* being far below us in the *khad*. Supplies of grain, ghee and milk were easily procured.

On the side of this hill and along the latter part of the march since breakfast, plants of the wild iris were abundant and apparently of two kinds: I say apparently, because I could only judge so, from the seeds, which differed not only in size and color, but grew somewhat differently, the largest seeds being close to the ground on a short stalk, and the smaller kind raised on a stalk of six or seven inches long. The plants had long ceased to flower, as the seeds were ripe and falling.

Some of these plants and seeds I collected and on my return to *Simla*, the former were planted and have this year (1837) put forth beautiful dark flowers of about half the size of the garden iris, and having the outer or hanging petals spotted with deep lilac, instead of being somewhat striated as in the cultivated plants at *Simla*: the whole flower is much darker. Whether known or not I leave botanists to decide.

This place was the first good monaul ground we came to, and the sportsmen of our party shot several fine birds in the afternoon. It is a beautiful sight to see a cock monaul rise from the cover; he takes wing rapidly down the *khad*, uttering a loud and musical whistle which he quickly repeats during his descent, until he again alights. They are very fond of perching themselves on the top of some bare rock or stone and thence surveying the ground around them. In the morning and evening while feeding, it is difficult to get near them, as they are wary birds, but the best time to get them is during the heat of the day when they are lazily reposing among the brushwood covers and are unwilling to rise, thus allowing you to come near enough to make pretty certain of bringing them down. Being strong birds, they sometimes manage to carry away a good deal of shot.

A sportsman can generally tell whether birds are in the neighbourhood, by observing the holes which they make in the ground in search of roots and insects. It is a curious thing, that when the monaul is

kept in confinement the bill, from wanting the friction caused by digging in the ground, becomes very long and hooked.

One of the party here shot a solitary snipe in a small patch of boggy ground near the camp. It is identical with that described by Mr. Hodgson as the *galinago solitaria* of Nepal.

After breakfast on the 29th we started over very hilly ground and narrow broken paths, guided by the shikaris of the party, and made a short march to a nameless place in the forest, on the side of a hill. No village being near us, we were obliged to bring on supplies from the last halting ground. Wild iris again abundant.

To-day some monauls and a young musk deer were shot. It has often been said that the musk deer is not eatable on account of the strong flavour of musk imparted to the flesh. We had the young deer dressed and all pronounced it to be excellent, and in my opinion, far surpassing any venison I have tasted in India.

The young deer has no musk bag and therefore cannot be offensive, and the same must apply to the female, who is also destitute of the musk. An old male may very possibly be bad eating, but so I suspect would be an old he-goat!!

On the 30th we marched up very steep and rocky ground, breakfasting at the edge of a wood and afterwards pushing on again over narrow paths, sometimes affording barely sufficient room for our feet. One of our party unfortunately fell and cut his knee, in consequence of which he came on very slowly, and complained much of pain.

This day we encamped at a village called *Shurmallee*.

Chicores and college pheasants were abundant here. Supplies of grain, ghee and milk procurable. We saw here among the trees, large flocks of the beautiful scarlet flycatcher and its yellow female, (*muscipeta flavinea*), as also the nutcracker crow.

Both of these birds are common at certain seasons at *Simla*, *Mahds-sú* and other places in the interior. I saw also at this place a fine hill fox.

There is a quarry of very good clay slate at this place, with which the houses in the village are roofed. Supplies of grain are by no means scarce among the villages on this route, and so far from being inconvenienced by the demands of our servants and coolies, as we had been led to expect, they have sufficient to trade upon and send grain of different kinds to *Rampúr* and other places. The country is well cultivated and judging from the appearance of the crops, and the healthy and well clad natives in the villages, the produce must be plentiful.

Having halted a day for our wounded companion we again resumed our journey on the 2nd October up a very precipitous and rocky ascent of several miles, and had rather a fatiguing march, the latter part of the way lying through dense forests with occasional enormous masses of rocks intercepting our path ; caves and traces of bears were numerous. We at length encamped in the middle of the forest with beautiful bold rocky scenery around us. Here, close to us in an opening of the forest was another large flock of sheep.

Whilst engaged in collecting mosses and lichens, which were here very beautiful and growing in abundance on the trees, I was startled at hearing a bear roar at no great distance from me. On returning to camp however, to give notice to the sportsmen of the circumstance, I learned that a shikári had come suddenly upon the animal which caused him to roar, while he scuttled away in one direction and the shikári another as fast as their legs could carry them, both wondering no doubt, why his enemy did not seize him ! We failed in finding him again.

The night was very cold and the water froze in the jugs. This day our supplies came from a village called *Thargong*, in the perguna of *Suppael*, at some distance down the *khads* below us, and the zemindar who was a fine ruddy-faced fellow, was very fond of snuff, which he carried wrapped up in a piece of paper, and stuck in the rim of his bonnet. Having a box in my pocket, which was labelled, and had once contained, "antibilious pills," I presented it to him, with which he appeared highly delighted, twisting and turning it about much after the manner of a monkey, and laughing and talking with his companions on his good fortune. He instantly put his snuff into it, took a pinch with an air of some consequence and threw the paper from him ; this was secured by one of his followers, as being very strongly impregnated with tobacco, it answered the double purpose of snuff and snuff-box !

The dress of the people hitherto consisted of the common cloth hill-cap rolled up all round, and the body clothed with blanket fitted close over the breast, plaited round the waist and falling to the knee, like a highlander's kilt ; on their feet they wear a sort of half shoe, half sandal, sometimes made of string plaited like chain work, with soles of the same or of leather ; others are made of coarse hill cloth or blanket and soled with leather.

In cold weather, too, they wear blanket trowsers, wrinkled and close fitting from the ankle to the knee, round which it becomes full and loose so as not to offer an impediment in climbing a hill.

In the tout ensemble of a well dressed hill-man of the interior, there is a rough and independent bearing which added to the distant resemblance in dress, not unpleasingly reminds one of the sturdy mountaineer of old Scotia. In make they are robust and well limbed, with legs that would be far from disgracing even the much loved tartan of the Gael.

The ottah or flour is carried in the skins of goats roughly formed into bags, with the hair left on.

Our march on the 3rd October was long, owing to the scarcity of water, and the path lay one while over dark and frowning rocks with the traces of bears on every side; and at another, through deep forest tracts.

The changes of temperature were here very great, for over the bare rocky pathway the sun glowed with such vigour, that we were compelled to toil up the steep ascents with our coats thrown off, while on entering the forest tracts, the air struck so damp and chill that we were glad to put them on again. At length we halted beneath a lofty hill, called *Callag* or *Currag*, far removed from any village. On the hill above us we found a bed of juniper bushes, the birch tree and mountain ash, while at the lower ground where we were encamped, currant bushes both black and red were in abundance, and all bearing quantities of fruit, but possessing little flavour.

Here again we found the monaul and also the Cornish chough⁵ or red-legged crow (*phyrracorax graculus*). Bears were very numerous and their traces quite fresh, and covering the ground in the vicinity of the currant bushes, which were broken down and destroyed in many places, in the attempt to obtain the fruit.

After breakfast the next morning we proceeded down a steep and wooded glen, the path often interrupted by a hill stream, over which sometimes we had difficulty in passing; fallen timber also impeded our progress not a little. This glen was thickly wooded the whole way and at last debouched upon a very pretty spot enclosed between high hills. Here we encamped at a small village called *Demrara*, in the perguna of *Bansírr*. Supplies procurable.

Walnuts, neaches and crab apples were here growing wild in the jangals. The chough was very numerous at this place, roosting among the rugged cliffs above our encampment.

In the lower and moister parts of the glen during this day's march we found many plants of the beautiful *mulgedium sagittatum*, a figure of which occurs in ROYLE's illustrations; the plants were in flower and also bearing seed.

At this place I purchased as a curiosity, a small hookah. It is made of the horn of a wild goat⁶ and is one of the simplest and roughest pieces of workmanship I have seen. The bowl is formed of the horn, the largest end of which is stopped with wax and resin, while in the smaller end a reed is inserted to draw the smoke through. On the upper edge of the horn near the broad end, another small reed is fixed which supports an unbaked clay chillum to receive the tobacco.

On the morning of the 5th we walked up a steep ascent to a large village called *Rowul* or *Role* where we rested awhile under the shade of a magnificent horse-chestnut tree.

The temple at this place was ornamented with the horns of the *Jehr* and also of goats. It seems a common practice in these hills, when a person wishes for the birth of an heir or the successful accomplishment of any undertaking, to sacrifice a goat or a sheep to the deity.

The sacrifice is performed by beheading the animal with a sacrificing axe of a particular shape, generally called a *dangrah*,—by Europeans termed a *Jubal* axe, from the circumstance of the best being manufactured in the *Jubal* country, near the *Chor* mountain. The animal when killed is taken home and eaten and the horns hung up at the door of the temple as a propitiatory offering to the *Devi*. There is a temple in almost every village and all have these offerings hanging about them. There is generally also a temple of this kind erected on the summits of the highest hills. On the tops of very high mountains and far from any habitation are often seen piles of stones, such as in the highlands of Scotland would be called “cairns;” these piles are dedicated to *Devi* who seems to be the favourite deity of the hill people*. Every person who has occasion to pass these cairns, or whose piety may lead him to them, places a stone upon the heap as an act of homage to the deity, and when these have become too high to be easily reached others are commenced. On these piles very fine specimens of horns of different animals are placed, and sometimes real curiosities may be purloined from them, but of course by stealth, for the natives would not fail to resent the affront offered to their gods, if they discovered it. We saw these piles, but found no horns. The elevation of *Rowul* is 9400 feet above the level of the sea.

Having rested here awhile, we again ascended a very steep and rocky pass of great height, and after a long and fatiguing march in a hot

* With good reason, *Párbatl* being the daughter of the sacred mountain, (see MILL'S *Uma*, J. A. S. vol. II.)—Ed.

sun, halted at a village called *Yachlí* or *Einchlí*, in the *perguna* of *Rújghar*.

From this place we had a splendid view of the *Rowal* ghát or pass, covered with snow and distant as a crow flies, about 12 miles. It lay to the left of our route. This pass attains an elevation of 15,555 feet. Some fine horse-chestnut trees and elms overhang this village. The latter trees were sadly disfigured, being little better than tall trunks with knots of young shoots springing out here and there; this is occasioned by the practice of cutting the tender branches and young shoots for sheep and cattle during the winter and other seasons when pasture is scarce.

A few chicores and college pheasants were all the game we could find.

On the 6th we descended into a *khad*, at the bottom of which ran a deep and rapid mountain torrent called the *Undraiti* river, which runs down and joins the *Pabbar* at *Shèrgaon*. This foaming torrent we were obliged to cross on what seemed to us inexperienced travelers a very rude and frightful bridge. It was merely the trunk of a tree with one side shaved flat, thrown across the river at a height of between 40 and 50 feet above the water, which ran roaring and boiling along between two enormous masses of rock. A fall from this rude bridge would in all probability have been fatal, for should a person escape falling on the rock, he would inevitably be carried down by the torrent, and probably receive some stunning blow in his rapid descent, and be drowned before he could make an effort to save himself.

We hesitated for a short time, but finding no place to cross the river except at this bridge, we of necessity took courage and passed over one after the other, by holding the hand of a *shikári* who preceded us. Even our hill people hesitated and one man did actually trust himself to the stream in preference. Two sheep attempted to cross but one of them slipping fell over, and was carried down a long way before he could get out again; the other one seeing his companion fall, turned back, jumped into the stream and swam across with some difficulty. The one that fell would not make a second attempt and was carried over on a man's back. Some of our dogs even were carried over!

After crossing this stream we climbed a hill for a few miles, till we came to a spring of water, where we stopped to breakfast and afterwards continued our route to a village called *Cabal* or *Khábar* where we encamped.

The natives of this place differed much in appearance from those of

the other villages we had passed. Many of them possessed a good deal of the Chinese cast of countenance, and had the beard and moustache growing in thin straggling tufts. Their eyes too were small and faces flattish. On their heads also they wore a different kind of cap, it being somewhat conical with a kind of tassel or button at the top. Others looked very like Jews and reminded me of the Bohras of *Neemuch*.

Many splendid elms and horse-chestnut trees, as also mulberries were growing here. During the autumnal months, the grass and other plants are cut and made into hay for the cattle during the winter; instead of being stacked, however it is loosely twisted into ropes of some length and then thrown across the branches of the trees near the villages, from whence a rope is taken as required. In other places it is made into small bundles and stuck or *filed* upon a long sharp pointed stake driven into the ground.

The horse-chestnut trees grow to a very large size, throwing out immense branches which yield a shade wide enough to encamp under; in October these trees were all bearing fruit nearly ripe, so that they must flower in spring or early summer. How beautiful must such enormous trees appear when covered with flowers!

We heard from these people that a party which preceded us to the *Burenda* pass, had lost three men in a snow storm.

After leaving *Cubal* we proceeded along the side of a barren hill, for some miles, and then gradually descended to a mill stream, where we breakfasted. These mills or *panchakkis* are very numerous on the hill streams near a village, five or six being often turned by the same water, within a few yards of each other.

After breakfast we continued our journey up a very long, steep and rocky height, having a beautiful valley below on the right hand, with the Pabbar river rolling and tumbling along through it, many waterfalls from the precipitous rocks on our right, contributed much to the picturesque beauty of the scene. We found the sun so powerful during this day's march, that we walked without our coats, and at length encamped beneath an immense walnut tree at a village called *Pekha* or *Piki*.

Here we were presented with a small basket of *Kanáwar* grapes and a quantity of very fine honey in the comb.

Bees are domesticated in almost every village throughout *Bassáhir*, but are not kept in hives in the open air as in Europe; the walls of the houses are made with several small square boxes in them which externally are even with the wall, and give egress and ingress to the

bees through a small round hole ; the door of this box or hive opens into the room, by which means the honey is easily taken out, and that too without, as in Europe, sacrificing a great number of the bees, for by blowing the smoke of burning grass or straw into the box through the doorway, the bees are driven out by the external hole, and thus the swarm is uninjured, and a portion of honey being left in the box, soon entices them back again.

In this village was a temple of *Deví* only half finished, and the villagers begged us to give them some quicksilver as they intended to consecrate the building in two days' time, and the mineral was required to complete the ceremony.

On the 8th we started at daybreak and breakfasted at *Janglíg*, which is the last, and according to Dr. GERARD, the highest village in the valley of the *Pabbar*, being 9257 feet above the sea, and is the usual halting-place for travellers, being about six miles and a half from *Pikí* ; but wishing to get on we proceeded another march through very pretty woods and interesting scenery to *Lítí*. The latter part of the march, however, was wild and barren enough, no trees growing except a few straggling birches, and these ceased also before we got to *Lítí*, the hills being merely clothed with rank grass and weeds.

Several kinds of rose trees were in abundance in these forests, and on the open hills many beautiful flowers were still in blossom notwithstanding their proximity to the snow and the lateness of the season. The greater part were, however, bearing seed or had shed it. Many flowers which on our leaving *Simla* were only just opening were here bearing ripe seed or had shed it, and the reason is obvious enough, for in these cold and elevated regions winter treads so fast upon the heels of summer that were the frost to set in before the seeds were perfected, plants would be destroyed and thus all animals, and in a few years perennials also, would become extinct : by flowering early and shedding their seeds before the wintery blast has power to hurt them, this is beautifully guarded against ! What care and foresight is here displayed by the allwise ruler of the seasons ; what circumstance or event, however minute, however trifling it may appear to us, if the well being of this world be at all dependent on it, is overlooked or disregarded by his most gracious providence ?

I collected great quantities of the seeds of a beautiful yellow flower called by ROYLE *Corvisartia Indica* ; this author gives *Pirpunjál* and *Cashmere* as the habitats of the plant ; I found it in flower on the side of *Huttú* mountain in the month of September and widely

spread over the open tracts between *Janglig* and *Líti*, bearing seeds, and afterwards at an elevation little short of 14,000 feet, among the snows above *Líti*, where it was also abundant and in seed.

On this march the traces of bears were frequent. Near *Líti*, we passed one of the "cairns" above alluded to, and our servants placed a stone on it, passing on the right side of it, which we were informed was always the custom, it being considered unlucky to go the left side.

At *Líti* is a bungalow, or rather an apology for one, there being windows without glass or shutters, and the two rooms wanting floors and ceilings. It is evident however that the planks of the ceiling have been torn down to furnish fuel for travellers. We arrived late in the afternoon at this drear and desolate abode, which stands in a wild and totally uninhabited valley at the foot of the *Burenda Pass**. The neighbouring and surrounding hills were covered with snow, and rose frowning above us to a great height.

All cultivation and houses cease long before the entrance to the forest, and for seven or eight miles from *Líti* no traces of inhabitants are seen. The place is well calculated to strike a chill into the breast of a traveller, and tired as we were, with all our coolies in the rear, and with some fear lest they should not come up that night, we looked around us on the still cold scene, with no pleasant feelings.

The sun too, beginning to get low and the sharp cold of evening coming on, with still no signs of our coolies and baggage, we began to think of retracing our steps till we should meet them, and had actually commenced a retrograde movement, when some of the servants came up and told us that the coolies were not far behind, so we went back to the horrid looking bungalow.

Our people at last coming up, we got the tents pitched and gave up the bungalow to our servants, as the night promised to be bitter cold.

The water froze before 9 o'clock at night in our goglets and at daybreak the next morning the thermometer stood at 25°.

The day broke on the morning of the 9th October, with thin fleecy clouds flying about and the villagers who had come on with us from *Janglig* with supplies of otah, and who were in the habit of crossing the Pass, advised us not to attempt it that day, as it is always dangerous when clouds are about. We therefore deferred our journey.

* This pass, generally known to Europeans as the '*Burenda Pass*,' is called by the natives *Booren gháttí* and *Brúoang gháttí*. The last name is derived from that of a village on the *Kanáwar* side.

We therefore deferred our journey, and ascended another hill overhanging *Liti* on the right bank of the *Pabbar* from the top of which is a waterfall, forming a stream which running down past the bungalow gives it its name of *Liti* or *Litung*, and empties itself into the *Pabbar*.

Near the top of this hill we crossed an immense bed of junipers, bearing flowers and berries with the same strong flavour as those of Europe. These were growing at an elevation little short of 14,000 feet and above the lowest line of snow, yet here among the moss scattered beneath them, I found shells of the genera *Nanina*⁴ and *Bulinus*. The difference between these and others apparently of the same species which I discovered at *Mahássú* and *Hattú* consists in size only.

In the former localities they are larger and less ventricose in the whorls, but the colors and markings are the same, as it would also appear are their habits, for at this spot, where snow lies for a great part of the year and which borders on the regions of eternal snows, the animal closes the aperture of the shell with the same thin gumlike substance as those of the warmer hills of *Mahássú*.

From *Liti* to the waterfall, is a steep and somewhat difficult ascent, of about 2000 or 2500 feet, after which a flat piece of land walled round with lofty snow-clad peaks, presents itself, through which the stream that supplies the waterfall, and which owes its origin to the snows above, slowly winds along.

Here I found some beautiful flowers growing among the moss and lichens above which they scarcely peeped, as if afraid to lift their heads into the chill and desolate region around them. Some of them occur in ROYLE's work on the Himálayan Flora such as "*Dolomia macrocephala*," which was abundant and in flower! and "*Corvisartia Indica*," widely spread and in seed.

Numbers of shrew mice (*Arvicola*) are found at *Liti* and high up the hills around it, as also a species of marmot⁵. This latter is about the size of a large rat, but the countenance and general formation externally have more the appearance of a young rabbit than a rat, especially as the tail, so conspicuous in the rats, is wanting in this little animal. One of these we were fortunate enough to capture; the length was scarcely six inches. Upper incisors with a deep groove; fur above deep gray like a rabbit, with a reddish tinge over the head, shoulders and sides. Whiskers very long. Ears rounded. It seems most nearly to approach the *Arctomys Bobac* of DESMAREST, or *Mus arctomys* of PALLAS, which is said to be found in Poland and northern Russia, but the length is given as 15 inches, whereas this is barely six.

They burrow like rats on the side of the grassy hills. Some of our party said they saw much larger ones than that above described, in which case there were two kinds, as our specimen, judging from the teeth, was decidedly adult.

ROYLE figures an animal very similar to this, which he obtained from the *Chor* mountain, under the name of "*Lagomys Alpinus*," DESM. or "*L. Pika*," GEOFF.

I hesitate to decide whether our animal is distinct from that of Dr. ROYLE because the specimen was so stiffened and dried when I had leisure to examine it, that I could not ascertain whether the incisors were those of *Lagomys* or *Arctomys*, and it is possible that what I considered a groove in the upper incisors, may be the separating line of the teeth, and in this case I should consider the animal identical with ROYLE'S. I shall soon be able I hope to decide, as men are gone in search of specimens, both to the *Chor* and *Burenda Pass*.

After staying a short time in this dreary spot and collecting as many seeds as I could conveniently carry, I followed the rest of the party who had already got far on their way down again, for the clouds had now gathered all round very heavy and promised a storm; the wind too became high and bitterly cold and very shortly after we had regained our tents, we experienced a fall of hail, while up the dreaded *Pass*, the snow was falling fast and made us sensible of the risk we should have run in attempting to cross it on such an uncertain day.

After the storm, which did not last long with us although the pass continued obscured and hazy, I went a short way up one of the hills to gather the seeds of some plants I had observed in the morning, and was in a shower of snow all the time; some of the party went up another hill a little way and experienced the same thing, while around our tents it was all clear again.

The seeds alluded to, were of a pretty little plant very abundant near *Liti* bungalow, called by ROYLE "*Gaultheria nummularioides*;" the seed-pods were of a bright blue color, and as numbers were growing on the same plant, they had a very pretty effect, peeping half hidden from behind the small dark green leaves. Here, also, I found a large bed of wild shalots.

At night it became very cold and a sharp frost set in; the thermometer at daybreak again standing at 25°, and at sunrise or when the sun topped the eastern side of the *khad*, it stood at 29°.

10th October. Thin clouds were seen as yesterday, but owing to a good deal of discussion having taken place the previous evening, we determined to try the *Pass*, intending merely to look over it and return.

For this purpose we took a guide and started. The path from *Ltti* wound along the side of a bare hill through a glen, which gradually became more confined and rugged, as we neared the *Pass*. On either hand, steep precipitous rocks towered above us to the height of about 3000 feet; near their base on the left of the *Pabbar* a few straggling birches were seen, and not far above them commenced the snow which became gradually deeper towards the summit of the cliffs. Along the bottom of this narrow glen, ran the *Pabbar* river, roaring and foaming as it dashed along over the rocks and stones, in its rapid and head-long descent from an immensely thick field of snow, to the left of the *Pass*, from which it takes its source. The end of this frightful glen is closed by the *Burenda* or *Bruang Pass*, whose highest peaks tower up to the height of 16,000 feet above the level of the sea.

Our guide watched the sky very narrowly during our approach to the gorge, and did not seem to think we had chosen a very favorable day for our ascent. Every thing was calm and still as death, and not a living creature was seen save the little marmot darting into its hole and the vulture-eagle roaring aloft over the snow-clad rocks. As we advanced however we heard the heavy sound which in mountainous countries often foretells a storm, and which I had heard on the preceding day. Similar sounds are emitted by some of the Scotch hills as *Bein-douran* in Glenorchy, and even the great falls on the river *Tummel* north of *Shichallain* are said to give warning of the approaching tempest*. The highlanders call this the "spirit of the mountain shrieking," and our guide seemed to entertain some idea of the kind, for he stopped and, turning to us, said something in his unintelligible hill patois, which to us sounded like, *mallah banch bolta hai†*.

Far above us, among the snows that crested the rocks to our left, we saw some of the *Bharal*⁶ or wild sheep which are only found in the most inaccessible places.

We had now ascended some way and our breathing began to be affected, obliging us occasionally to pause and rest.

Before us lay the *Pass* now plainly laid open, and beneath it, to our very feet, was spread a bed of broken and disjointed rocks of every

* STEWART'S History of the Highlanders.

† Although we made him repeat the words several times, we could make nothing of it, and therefore construed them after our own fashion, viz. that "Mother Bunch was speaking!!" The guides declared that when these sounds were heard thrice during the day, i. e. morning, noon and evening, it was a sure sign of a storm or bad weather. [Queré *Himála* 'bach' *bolta hai*, 'the mountain cries 'escape.'—ED.]

size, hurled together in wild confusion from their original position on the heights above by the combined effects of frost and heat, each succeeding year apparently adding something to the general wreck produced by the wintery warring of the elements since the world began. Over these disjointed masses was spread an almost unbroken sheet of driven snow, which concealing alike the rocks and chasms beneath, proved a difficult and somewhat treacherous path.

Whilst pausing here to take breath, we espied something red lying beneath a ledge of rock at no great distance from us, and sending a man to reconnoitre, found it to be a human body rolled up in a red *rezaï* and frozen to death!

Our guide now without speaking, resumed the path at a quick pace as much as to say "make haste, or you see what might happen." We followed and a very few paces again brought us to another frozen victim lying on our path.

His head was bound up in his waistband and part of it drawn across his eyes, as if to protect them from the driving snow, and he had fallen apparently exhausted on his back, with the left arm outstretched and the hand clenched; one leg was drawn up and much cut by the stones among which he lay, while the other was extended. The mouth was open, but the eyes were partly closed, probably from the pressure of the bandage over them. These two poor wretches were part of Dr. POWELL's attendants of whose loss we had heard at *Cabul*. Soaring round above the body were a pair of vulture-eagles⁶, who seemed waiting for some assurance that life was extinct ere they ventured to descend to their repast. The body was still fresh and emitted no stench whatever, owing to the coldness and elevation of this desolate region, although it must have lain there for at least a fortnight, the party having been overtaken by a snow storm about the 26th of the previous month (September) at which time we had rain at *Nágkunda* and remarked the unsettled appearance of the weather over the snowy range. The bearded vulture waited but for some token of decomposition to pounce upon his prey, and until such took place, (so healthy appeared the body) he could not distinguish between sleep and death!

Is not this additional evidence that, "sight and scent combined," are the means by which the vulture is directed to his prey? His quick eye had rested on the prostrate form below, but effluvium was wanting to assure him that the banquet was prepared.

The sight of these poor frozen wretches, apparently in rude health at the time of their death, damped our spirits a good deal and we

pushed on towards the summit, now fully convinced that the stories we had heard, of the dangers of the *Pass*, were but too well founded.

Three of our party had reached the top, but I was still about 200 yards from it, feeling so sick and my head aching so much from the reflection of the sun on the snow, over which we were climbing, that I could not walk fast, which the guide perceiving he at once said, "We cannot wait here, so come down," and away he went, followed by the party who had gained the summit, for the clouds had gathered thick and fast during our ascent and promised a storm. On passing me, they warned me to turn and I nothing loath obeyed them instantly.

The time occupied in ascending and returning was about $4\frac{1}{2}$ hours, and we had scarcely arrived at the encampment, when snow began to fall, and sick of the spot from the frightful and desolate scenes we had witnessed, orders were at once given to strike the tents and we marched off towards the forest on the road back. Never was an order more cheerfully obeyed or an encampment more speedily struck than was ours, and a smile gladdened the face of each shivering coolie as he trudged along beneath his burthen, from those regions of gloom and death.

Hail and snow fell occasionally during our march and at last we halted for the night in the forest about six miles from *Litt*, having walked at least eighteen miles during the day, and all right glad to get away from the horrid place we had left.

It afterwards proved that we had not left the *Pass* a minute too soon, for the next morning the ground was white with snow as low down, as our encamping ground at the bungalow! The forest near *Litt* abounds with game of the pheasant tribe; we did not stay to shoot however, as we were anxious to get back to *Simla*, some of the party being obliged to return to the plains. A monaul was killed and several others heard as also plass. A bear too was followed by a *shikári* but without success.

On our return from *Litt* we fell in with three or four men from *Janglitg* all carrying skins of attah on their backs; they told us they were going across the *Pass* into *Kanúwar* to barter their flour for salt which they sell to the neighbouring villages. That night they would sleep near the foot of the *Pass* beneath some bold projecting rock or at the bungalow, and push across the next morning while the weather was fine and the day before them. The storms seem to gather and break about the turn of the day, or one or two o'clock in the afternoon.

On the morning of the 11th October we proceeded to *Janglíg* where we again stopped to breakfast after a downhill march, beneath a grove of large elm and horse-chestnut trees. Here we found immense quantities of small garnets imbedded in the mica slate with which the walls are built. After breakfast we proceeded down a very steep and rocky road to the banks of the *Sapan*, a stream which empties itself into the *Pabbar*, and over which is a tolerable sankho; from this our road lay through a very beautiful glen on the banks of the *Pabbar*; it was thickly wooded and by the side of the path many beautiful flowers were growing, and among them several species of *impatiens* or wild balsam, one of them of a pure milky white.

This day we encamped again at *Pikí* which has an elevation of 8759 feet. The distance from *Janglíg* is about $6\frac{1}{2}$ miles.

From *Pikí*, instead of retracing our steps to *Simla*, by the route we had come, i. e. keeping the heights and marching across the ridge of the hills, we proceeded by the regular road down the valley of the *Pabbar*, which is a most beautiful and richly cultivated country, with the river from which it derives its name running through it. The crops are chiefly rice and are abundant. Pulse of several kinds is also grown here.

From the accounts we had heard, before leaving *Simla*, of the poverty of the natives and the scarcity of supplies in the interior, we were prepared to see a country almost void of cultivation.

This, however, is far from being the case, and in the valley of the *Pabbar* especially, the luxuriance of the crops could scarcely be exceeded. Indeed, throughout our trip, nothing could be more opposed to such an idea, the natives stout and healthy in appearance, their clothing good, and crops luxuriant: every thing in fact bespeaking abundance. That they have sometimes little to spare to travellers, does not arise from any want of necessities, but is solely attributable to their sending all the grain out of the country, keeping merely sufficient for the wants of themselves and families, and exporting the surplus which is great, into *Kanáwar* and the higher states where grains are not so easily cultivated, and where therefore they find a ready and profitable market. This surplus is either sold, or bartered for salt and other necessities. Their rents, too, are often paid in kind; that is, in the produce of their lands. Thus it not unfrequently happens, that the very people who are striving to impress upon the mind of a traveller, that they are pinched by want and poverty, are in fact comparatively rich, and this dissimulation is prompted by their avarice as an excuse for extorting a heavy remuneration for the pittance doled out to him.

Proofs of this occurred to us more than once when we had occasion to demand supplies for two or three days. for, by offering an advanced price very little difficulty occurred in furnishing the necessary quantum.

In the valley of the *Pabbar* the standard grain is rice, which is either sold or bartered in *Kandúwar* and *Nawur* for salt and iron. The *khèts* are well irrigated by the numerous rills and mountain streams which flow down to join the *Pabbar*, thus causing little, or none of that hard labour, which falls upon this class of cultivators in the plains of India. In lands which are warmly situated and where two crops are produced, the principal grains are barley and several species of millet; the former is sown in March and April, and gathered in July, when the land is again made ready for the reception of the other grains, which are reaped in the autumn. In higher and less favoured situations and where only one crop can be perfected, the celestial and common barley, wheat and millet are sown in spring and reaped in September and October. Many other grains are also extensively cultivated, such as *bhattu* (a species of *amaranth*), cheena and *kodah*, (*panicum miliaceum* and *paspalum scrobiculatum*.) Besides these, various garden vegetables are cultivated in small quantities for home consumption.

The fruits are walnuts, apricots, wild quinces, peaches, and plums, none of which however are of any value owing to neglect and want of pruning and seldom ripen in the higher tracts. In a country where such endless varieties and gradations of climate and soils are at command, these and many other fruits might with little trouble be successfully cultivated and yield both a useful and profitable addition to their diet and exports.

The valley of the *Pabbar*, downwards from *Janglig* is so level and presents so few difficulties, that, were encouragement given to the project, a line of road might possibly be traced out, through the valleys of the lower hills and made to debouche upon the plains. This if once effected would enable hackeries and other wheeled-carriages to penetrate to within two marches of the *Burenda Pass*, or as far as the village of *Ptki*, and offer a readier and cheaper means of conveying the products of the interior to the plains, than the present slow and expensive mode of carrying every thing on men's backs. So also the produce and luxuries of the plains would contribute in no small degree to the refinement and pecuniary advantage of the rude mountaineers, and by giving them a more extended field for speculation, encourage them to throw aside their idle habits and turn the mineral

and agricultural resources of their yet almost unexplored countries to some account.

The articles of barter and sale among themselves, and their exports, consist now of wheat, common and celestial barley, bhattu, rice, ogul opium, tabacco in small quantities, tar, turpentine, kelu oil, apricot oil, raisins, currants, ginger, neozas, iron, borax, salt, leathers and skins, chowries, blankets, woollen caps, shawl wool, potatoes, tea, and honey. The wax, too, if separated from the honey, would be an additional and abundant article; at present it is mixed up and eaten with the honey by the natives. Iron though abundant in some parts is nearly doubled in price by the time it reaches the plains owing to the mode of conveying it by coolies and the taxes levied upon it by the chiefs through whose states it has to pass.

The cattle on this side the *Himalayá*, consist of a small herd of cows and oxen, mules, sheep and goats. The sheep are pastured over the open grassy tracts of the upper hills and constitute one of the chief sources of profit, by furnishing good wool for blankets and other woollens, both for export and home consumption. Oxen are used in ploughing in the valleys, and on the hill sides when not too steep, but where the slope is great or the space confined, the ground is dug and cleared by the women, on whom indeed almost all the drudgery devolves, the men, when not engaged in transporting the produce of their farms, preferring to make woollen shoes, caps and blankets, or to lounge about idle in the villages.

That these mountains contain mineral treasures of no mean value there can be little doubt, and were research encouraged in this branch, some important results might ensue.

To some valuable discovery, made near the *Gangtung Pass* on the road from *Dabling* to *Bekhur* on the confines of Chinese Tartary, the hints dropped on his return, by the enterprising traveller M. JACQUEMONT, no doubt referred; why else, should he have evinced so much anxiety to prevent any European from visiting that quarter, until he should be able to make known his discovery to the French government and return under their auspices to avail himself of it?

Report says, that he earnestly entreated Major KENNEDY, not to allow a European to visit that *Pass*, until his return, and added that he "hoped whoever attempted it, would fall over and break their necks*!!"

* "If an Englishman go thither, never mind;—but if a German or a French naturalist visit it,—give your guide a hint to walk him over the precipice"—was the expression, in *badinage*, of the enthusiastic traveller; certainly betokening

What the discovery was he would not divulge, but from his eagerness to shut that route to future travellers, it was doubtless of importance.

Particles of gold occurring in some of the hill rivers would lead to the conclusion that it must exist in the rocks, through which these rivers sweep, and becomes detached by the rush of waters. That gold therefore, was the discovery hinted at, is neither impossible nor improbable. It is certain that none but the precious metals would have been worth the notice of the French government.

The subject is perhaps worth inquiring into and research directed to that quarter, might bring the hidden treasures to light.

After breakfasting on the road at the same mill stream we had stopped at in coming, we pushed on as far as *Shèrgaon*, where we encamped for the night after a walk of about eight miles through a lovely valley. The village of *Shèrgaon* stands at the point of confluence of the rivers *Undraitee* and *Pabbar*. The former stream runs down through a valley of rice fields, the produce of which is held in much estimation and is reserved, we were told, for the use of the rája of *Rampore* to whom the country of *Busahir* belongs. Several of the houses in this village had small patches of flower ground, and the "Marvel of Peru" with its various colored flowers was very abundant.

On the 13th of October we left *Shèrgaon* and proceeded $11\frac{1}{2}$ miles to *Rúru*, intending to breakfast on the road, but so well was every inch cultivated that we could find no convenient place to pitch a tent, and were therefore obliged to wait till we arrived at the village; we afterwards marched four miles farther, leaving the regular road and striking up again to the heights on the right of the valley. The whole of the march from *Shèrgaon* to *Rúru*, is most luxuriant in rice crops, and the appearance of the natives bespeaks abundance.

Between these two places we met several Sikhs who reside in these parts and carry on a traffic with the plains.

Our camp was pitched near a small hill stream from which some fishermen brought us a dish of delicious trouts. They catch them in rather a novel manner, placing across the stream a long rod on which are fastened at short intervals a number of hair nooses, into which

that he had some curious discovery (probably of fossils) of which he would secure the first honors; and affording an amusing estimate of national curiosity.—Still is it not confirmed by the fact that no Englishman has since sifted the nature of JACQUEMONT'S interest in that spot?—ED.

the fish are driven by a man who gets into the stream and turns up the stones as he approaches the rod.

From their attitude, we at first thought they were tickling the trout as they do sometimes at home. I have seen the same fish brought from a stream below *Subathú*, and they appear to be identical with that described by Dr. McCLELLAND as the mountain trout of *Kemaon*.

The mode of capturing them is, however, somewhat more ingenious than that mentioned by him.

Chicores and black partridges⁹ were abundant at this place.

On the following day we continued our journey up the hills, breakfasting as usual on the road and encamping, after a long and steep ascent the whole way in a hot sun, on an open hill about five miles from our old encamping ground at *Tútú*.

Monauls, plass and chicores abundant.

On the 15th October we proceeded through a thick wood over very slippery paths and encamped once more at *Tútú* on the heights.

Here we found a man who had come from our last encampment to beg for some remuneration for the loss of a fine hill dog which guarded his flocks. One of our party had been chased by him, while shooting near the sheep fold, and finding a volley of stones insufficient to keep the animal from seizing him, he was at last obliged to fire in self-defence in the dog's face, from which the man said he was dying.

As a dog of this dog kind is invaluable to these poor people, he received a sum of money to enable him to purchase another and went away quite satisfied.

From *Tútú* we went next morning to *Bagie* where some of the party found their ponies awaiting them, and after breakfasting and resting awhile we continued our march, skirting *Hattú* and at last arrived once more in safety at *Nágkunda* bungalow.

At this place two of our friends left us on the following morning on their way to *Simla*; the remainder of the party halted here one day, and on the morning of the 18th October walked to *Mattiána*, through the forest across the tops of the ridges, which is a shorter and more beautiful route than by the made road.

Numbers of monauls and plass pheasants were put up and also a musk deer.

After breakfasting at *Mattiána* which we reached after a walk of $3\frac{1}{4}$ hours, I also deserted and made the best of my way to *Simla* where I arrived on the evening of the same day.

Miscellaneous and Zoological notes to the Journal.

¹ *Flowers*.—Among the most common are the "*Anemone discolor*," "*Potentilla pteropoda*," "*P. Cantleyana*," "*P. Saundersiana*," "*Chaptalia gossipina*," "*Parnassia nubicola*," "*Campanula cashmeriana*" and "*Hernineum gramineum*," of ROYLE. These are found at Simla and for several stages into the interior. Also a species of Columbine (*aquilegia vulgaris*?) and that curious flower "*Ceropegia Wallichii*."

² *Lepidoptera*.—Butterflies.

Fig. 1.* "Swallow-tailed butterfly;" "*Papilis marhaon*." This is found at Simla and in the interior. It does not appear to differ from the European insect.

Fig. 2. Is a species which was captured in the *Serdree* jungals, near *Neemuch* and is now in my cabinet; it is here figured to show the approach to the "scarce swallow-tailed butterfly" of Europe, "*Papilio podalirius*;" it is, however, smaller than that insect and wants the eyes or ocellated marks on the wings, and it differs also in the distribution of the dark bands. It is probably not unknown to science, but is figured to show the affinity to "*P. podalirius*," and with the hope that some naturalist may favour me with its name, as I have failed to recognise it from descriptions.

Fig. 3. "Tortoise-shell butterfly;" "*Vanessa urticae*." The larva feeds on the nettle and is like that of Europe; it is found in May and again in July. The chrysalis or pupa is suspended by the tail. This is one of the commonest and most hardy of the Himálayan insects, and is found all the year round, winter not excepted.

Fig. 4. "Painted lady;" "*Vanessa cardui*, (*cynthia*)." This is also common and found throughout the year like the last. I have seen both and also *Vanessa polychloros*, sporting in the sun, even when the ground was covered with snow. It also occurs very plentifully at *Neemuch* during the rains.

Fig. 5. "Large tortoise-shell butterfly;" "*Vanessa polychloros*." This is not so common as the small species, but is also a hardy insect, and may be seen during the winter months, sporting about in the sunshine.

Fig. 6. "Himálayan admiral;" "*Vanessa Vulcania*." This is very closely allied to the European admiral, but the Rev. Mr. BREE, who compared the insects in England, seems to think them distinct. See *Loudon's Mag. Nat. Hist.* from which I have copied the figure. It is not uncommon during the summer months. It occurs also at *Neemuch*.

"*Argynnis Aglaia*." This is only met with during the summer and early autumn. It scarcely differs from the European insect. *

Fig. 7. "Marbled white butterfly;" "*Hipparchia galathea*." This is found during summer and early autumn. It is a variety only of the European insect.

* We are reluctantly obliged to omit the plate (or rather two plates) of these illustrations. Without color, however, justice could not be done to them.—ED.

Figs. 8 and 9. "Large cabbage butterfly;" "*Pontia brassicæ*." This is a very common species, appearing in March, April, May, June, and July. In the latter month it is scarcer, as are all the hill species, owing to the constant cloudy and rainy weather. The larva feeds on the cabbage, turnip, and other plants.

Figs. 10 and 11. "Small cabbage butterfly;" "*Pontia rapæ*." This is also a common species during the summer months.

Fig. 12. "Brimstone or sulphur colored butterfly;" "*Gonepteryx rhamni*." This beautiful insect is very common at Simla and the interior. It appears as early as March, and is one of the latest on the wing in autumn. There is another species or variety found here in March and April, which has the superior wings of a bright sulphur like the male, and the posterior wings nearly white as in the female.

Fig. 13. "Black-veined white butterfly;" "*Pieris cratægi*." The most numerous of all and of every size during May and June. The pupa is supported by a silken band round it.

³ *Coleoptera*.—Beetles, *Lucanidæ*, or stag-beetles. ROYLE figures a fine species of stag-beetle, which is not uncommon at Simla in July, under the name of "*Lucanus lunifer*." The female is not given, but in color it is the same, wanting as usual the large jaws of the male, and being inferior in size; both sexes are highly pubescent when recently and carefully captured.

The color is a deep olive brown; head, thorax and elytra thickly clothed with soft hairs of a pale mouse color. The jaws of the female are short and stout with a square tooth in the middle. The legs are all spiny. Length of the male from the tip of the jaws two inches and a half; female one inch and a half. In addition to these I have collected here and at Mahāssā, four or five other species.

The food of the *Lucanidæ* being yet but imperfectly known, although it is supposed to be the sap of trees, it may not be amiss to remark that I have repeatedly found them feeding at the base of oak trees, their bodies half buried in the earth, wounding the origin of the roots with their jaws and greedily sucking up the juice as it exuded.

Cerambycidæ, Capricorn Beetles. I have taken more than 20 of the larvæ of one species out of a decayed oak tree. The insect which destroys timber in the plains, which is often heard gnawing in the legs of tables and chairs, and usually known by the name of the "Carpenter" from the noise it makes in boring; is the larva of a species of Capricorn beetle.

Elateridæ, click beetles. These are the beetles, that, when laid on their backs, can by a sudden jerk of the head and thorax, throw themselves again on their legs. In my school-boy days, they were known by the name of "backjumpey."

There is a very common beetle at Simla during the rainy season, which I believe to be the "*Scarabæus Phorbanta*" of OLIVIER's insects. It is chiefly found in heaps of cow-dung. OLIVIER gives Senegal as the habitat, but his characters which I subjoin, agree so closely with my insect, that I must consider them identical.

"*Scarabæus scutellatus*, thoracis cornu incurvo apice bifido, capitis recurvato bifido.

"*Scarabæo gedæone paulo minor*; capitis cornu recurvo apice bifido, absque dente. Thorax niger, lævis, nitidus, cornu magno, porrecto, incurvo apice bifido. Elytra lævia, brunnea: differt à *Scarabæo gedæone*, cornubus minoribus absque dente."

These characters are so good, that a description of my specimen would be but a repetition.

The female is similar in colors, but has no horns on head or thorax. They emit a squeaking noise when touched, which proceeds, as in many other species, from rubbing the extremities of the body and the elytra together.

These beetles differ considerably in size and in the development of the prominent projection of the thorax, some having it large and well defined, while others have scarcely any signs of it. And yet though they thus differ, they must still be regarded as one and the same species, because all couple with the same females, which also differ much in size. This difference arises from the various degrees of nourishment which the larvæ have procured, for those which obtain a plentiful supply of food, will grow to a much larger size than those which have been stinted in this respect.

The many varieties of a species arise chiefly from such causes, as a scarcity of food and prematurely becoming pupæ, (which change many undergo on finding their supplies exhausted.)

The pupa also, may be placed in an unfavorable situation, and therefore will not produce so fine a specimen as one which has been more fortunately placed. The pupæ of beetles, and perhaps, of most kinds of insects, which are buried in the earth require a moderate degree of moisture to bring them to perfection, and it may be said that even in this state, the animal receives nourishment.

In proof of this, I took a number of the grubs or larvæ and the pupæ of the present species, as well as of some other kinds, and placed them in a box of earth similar to the soil in which they were found. Many of the larvæ died from not finding sufficient nourishment, while others which were in a more forward state, became pupæ, but these were always much smaller than those which had been full fed.

The beetles produced from these were consequently small and the development of the horns very slight. The full-formed pupæ which I had taken, were placed, some in moist earth and some on the surface of it. Those which were buried and received nourishment from the soil, produced fine healthy beetles, while on the other hand those which were on the surface or only partially buried, produced imperfect specimens, the wings being shrivelled up and never coming to maturity, while again numbers of the pupæ dried up and never produced anything.

This circumstance satisfied me that nourishment was as necessary to the pupa, as to the larva and imago, and although the two latter alone take food, yet moisture and warmth are felt and imbibed by the pupa, and are as necessary to the

formation or production of a perfect and healthy insect, as food is to the larva. If moisture be withheld, the skin of the pupa shrinks and hardens and the insect has not room to expand and perfect its parts.

From this cause I am led to believe that many varieties, have been unnecessarily raised into species and described as distinct.

The mere circumstance of their differing in size and proportions can never really separate them; as well might two brothers be deemed of distinct species because the one happens to be six feet in stature and the other a dwarf. Such a comparison is by no means absurd, because many of the ova deposited by our female, will eventually produce large and well-formed insects, and the rest produce their diminutives. These, therefore, can never be received as more than mere varieties of each other, and indeed I can scarcely consider the offspring of the same parents as varieties at all. The offspring of two females of the same species may possibly be reckoned as varieties of the same, should they happen to differ; but surely the children of one mother, produced at one birth, must be to all intents and purposes one and the same species.

Thus when two insects of the same species differ merely in size and the greater or lesser development of horns, spiny or other processes, they may be termed "Varieties." But a difference in structure, habits, food or general economy would alone authorize their being classed as distinct species. By difference in structure, I would be understood to mean, of different forms, because the mere circumstance of a horn or spine being greater or less, in some, than in others does not constitute a different, but only a greater or less development of the same structure.

It is perhaps a remarkable fact, that almost every species of *Coleoptera*, has its diminutive, and the only way, in which to account for this lies, I think, in the abundance or scarcity of proper nourishment they receive in the larva and pupa states.

While speaking of insects, it may be as well to observe that it has hitherto been received as a rule, that sexual commerce is unknown to the larva state; this rule cannot now wholly apply, as during the past year, I have repeatedly seen the larvæ of a species of grasshopper in connexion during the summer months, at Simla.

⁴ *Land Snails*.—Two species of *Nanina*, one (or two) of *Bulinus* (reversed) and one of *Clausilia*, being new to science, will, with many others, shortly be described in a separate paper and submitted to the Asiatic Society. "*Clausilia elegans*," nobis, is sadly destructive to the oak of these mountains, which they seem to prefer to all other trees. They bore into every crevice and live in the rottenness they have created, grinding and reducing the fibre of the wood to the consistency of wet sawdust.

In the 3rd No. of the Journal of the Asiatic Society, Dr. ROYLE observes, that the shells of these mountains do not differ from those described by Mr. BENSON as occurring in the Gaugetic provinces. Of twenty species which

I have been fortunate enough to discover since my arrival at *Simla* in 1836, there is perhaps only one species identical with those of the plains, all the others I believe, being new to science. It is not very surprising, however that Dr. ROYLE should have committed this error, because the shells I allude to, being of retired habits and only found in situations, to which his pursuits would scarcely lead him, would of course escape observation, whereas the species which probably led him into error, is found, during the rains creeping up every plant and shrub, and is the most numerous of any species. It is the "*Nanina vesicula*," of Mr. BENSON, found by him at *Rajmahal*, and by myself at *Neemuch*. It is abundant from *Monree majra*, at the foot of the hills, to *Simla* and *Hattú* mountain (10,656) and probably farther into the interior.

I found a reversed species of *Bulimus* at the *Burenda Pass* at an elevation little short of 14,000 feet, which I imagine is higher than the living species have ever yet been found.

♂ *Birds*.—Plass or Pucras pheasant; "*Euplocomus pucrasia*." This bird is called by the hill people in different parts, plass, pokrass, koklass and kokrass. They are usually found in pairs and are rather shy birds. They do not bear confinement well, but pine and die in a short time. A very indifferent plate of this beautiful species occurs in the Naturalist's Library.

The breeding season is the latter end of April and all May.

College or khallidge pheasant, "*Euplocomus albocristatus*."

This is called the college pheasant, but oftener "*Múrgí*" or fowl, by the hill people. They thrive well in confinement and might with a little attention be added to the poultry yard. Their flesh is white and delicate. The tail feathers of the male bird are somewhat arched and approach in this respect the genus "*Gallus*." The tail is generally elevated when the bird is in motion.

These are the most abundant of the pheasant tribe in the hills and are often seen in small parties. They seem to frequent moist and wooded *khads*, whereas the plass prefers the heights. In the winter numbers are brought to *Simla* for sale at three or four anas a piece.

They breed, as the last species.

Monaul, or Bunaul; "*Lophophorus impeyanus*." This and the two foregoing are common from *Nágkunda* to the *Burenda Pass*. In the winter they come down close to *Simla*. They prefer forests on the hill side, in which is plenty of brushwood. They are not difficult to tame but do not live long in close confinement owing to the want of proper roots, &c. which in a wild state they are very fond of.

They breed in May.

As specimens, these and the above birds, are not worth shooting from the month of June until October, during which time they are in moult. The note of the male is a loud and musical whistle which he repeats quickly when alarmed.

They may be ascertained to be in the neighbourhood, by the holes they dig with their bills in the ground, in search of roots and insects.

In addition to these three pheasants, are found the "*Cheer*" and "*Jahgee*" or horned pheasant. The latter is only procurable during the winter season, and that only in the interior, near the snow. The shikáris who bring them stuffed to *Simla*, say that, as the winter becomes more rigorous above, these birds descend before the snow; they are inhabitants of the higher and colder regions of *Kúlú* and *Bhotan*. They live in pairs, it is said.

The only species brought to *Simla* is the "golden-breasted Tragopan" (*Tragopan Hastingsii*). It is known here as the Argus pheasant. The young males have the plumage of the female, with a rufous throat.

The "*Cheer*" is a beautiful bird and has more of the character of the true pheasants, than any of the others; it is found in the neighbourhood of *Simla* during winter and is not scarce. Their food consists of acorns and other seeds, as also insects. The largest bird in my collection (and I believe in *Simla*) measures in length from the tip of the beak to the end of the central tail feathers, forty-four and a half inches.

Another bird called the *Bhyre* or *Bhair* is found on the verge of the snows during winter but the shikáris say, they know not where it comes from. They live in covies like the chicore (*Perdix Chukar*), but are much larger birds. The plumage somewhat resembles that of the *Plarmigan* in its summer plumage. By some it is called the "Ladak partridge."

Chicore; "*Perdix Chukar*." These well known birds are numerous on the sides of bare hills near cultivation. They are easily detected by the noise they make in calling to each other. They are good eating and are sold during the winter at two annas a piece.

Black partridge; "*Perdix Francolinus*." These birds are by no means scarce in the hills, but they confine themselves to *khads* near cultivation.

Woodcock; "*Scolopax rusticola*." Is found at *Simla*, *Mahássú* and *Fágú* in *khads* near water-courses. It is probably also to be met with farther into the interior. The time of arriving at or leaving these places is unknown, but I have seen them at *Mahássú* in the beginning of August, and have had them brought to me from *Fágú* in April. It is therefore not improbable that they remain throughout the year and breed in the last mentioned places, that is in the forests of *Mahássú* and *Fágú*, where, ascending to the heights or descending into the depths of the *khads*, they can very sensibly change the temperature.

At *Simla* they have been found in November.

Three species of the *Scolopacidae* mentioned by Mr. HODGSON in the GLEANINGS IN SCIENCE as inhabiting *Nepal*, are found here and in the interior; viz. the woodcock, (*Scolopax rusticola*;) woodcock snipe, (*Scolopax gallinago*,) and the solitary snipe (*Gallinago solitaria*).

I have not been able to learn as yet that the common snipe (*Gallinago media*) is found here.

Chough or red-legged crow; "*Phyrrocorax graculus*." These do not appear to differ from the European birds. They are numerous among the rocky heights of the interior, from *Currag* to the *Burenda Pass*.

Bearded vulture or vulture-eagle; "*Gypaetos barbatus*?" These birds are common at *Simla*. I do not think they are identical with the European bird, and shall shortly have occasion to mention them in a separate paper.

* MAMMALIA.—Leopard. *Felis Leopardus*.

One of these animals entered the bedroom of Lieut. PENGREE 39th regiment, N. I. and seized a bull dog that was chained to the bed. During the struggle the chain was broken in two places, and Lieut. P. starting out of his sleep and seeing his pet dog beneath the leopard, he, without reflecting on the danger, instantly threw himself upon the animal and clasped him in his arms. Receiving a scratch from the brute's hind legs, as a notice to quit, he thought prudent to let go, when the leopard sprang through the door and escaped. The dog which was a powerful animal, was scarcely hurt.

I have a fine specimen which was shot by some villagers near *Simla*, who said he had destroyed several cows. He was a large male and rather exceeded the size given by FRED. CUVIER.

All animals should be measured previous to skinning them, otherwise an accurate statement in this respect can scarcely ever be given, as sometimes they are stretched in the process, and at others, have shrunk in the curing. The colors also should be noted previous to curing the skins or they are very liable to undergo considerable change.

Leopard Cat. *Felis Nepalensis*; vel. *Bengalensis*. This beautiful animal is about the size of a domestic cat and marked with dark spots and dashes on a tawny ground. Some are lighter colored than others. They are not easily got at, but cannot be called uncommon, though seldom seen.

They are found at *Simla*, *Mattiana*, *Piké*, &c.

The natives of the hills apply the name of "*Laggarbágha*" to the leopard, while in the plains the same is used to denote the hyæna. The leopard cat, (so called by collectors,) is by the hill people called "*Chota Laggarbágha*," and sometimes "*Laggarbágha ká buchhá*" or young leopard.

I have a very beautiful specimen alive, but so savage that I dare not touch her.

They breed in May and have three or four young at a birth, which are carefully deposited in caves or beneath large masses of rock.

The following is a sketch of my living specimen. Ears rounded and without tufts. Black at the base and summits, the middle space whitish. General color above, tawny, with numerous irregular spots of black or deep brown. Whiskers white with brown spots at the roots, arising from a white ground; lips white as also a stripe between the nose and the eye. A white patch on the cheeks surrounded with black forming two bands, the lower one turning downwards and uniting under the throat. Four dark lines along the head arising from the eyes and nose, the two centre ones forming a loop enclosing a dark spot, on the forehead.

Two oblong large brown spots on the shoulders or withers. Tail irregularly spotted to near the tip, where it becomes annulated. Feet with very small spots on a lighter ground; inside of the forelegs with one dark band, hind legs with two dark bands. Under parts white, spotted with black on the belly; somewhat banded with the same on the breast. An irregular line down the back, formed by a double row of oblong-shaped brown spots.

Fur soft; eyes brown.

I have a mutilated specimen which I bought from a villager at *Piké* in the interior; it has the ground color above rather paler than my living animal, but in other respects does not differ.

The length from the nose to the origin of the tail is about seventeen or eighteen inches, and the tail eleven inches, giving a total of about two feet, four inches.

I am doubtful whether this should be considered as the *Bengal* or *Nepál* cat: it certainly has markings in some measure common to both, and as the habitat of the former does not appear to be strictly known and the descriptions are supposed to be taken from immature specimens, it is possible that the two may prove to be the same animal. The only descriptions of these animals that I have access to, are contained in the Naturalist's Library, and the animal there given as the Bengal cat is said to have been received from *Java*. The plate does not agree with my animal although in some respects the description does. In the synopsis at the end of the volume it is called the Bengal cat with a mark of doubt affixed. It is said that the "species is hardly confirmed by any author." With regard to the *Nepál* cat the figure in some measure agrees, as also the description. It is taken from the Zoological Journal, No. 15.

Hill Fox. *Canis vulpes montana*—PEARSON. During the winter, especially when the snow is on the ground, these animals are very numerous about *Simla*, and come close to the houses in search of offal or other prey. It has been well described by Dr. J. T. PEARSON in the *Journal Asiatic Society*.

They breed in the end of March or early in April and have three or four cubs at a birth.

I have three young ones alive about seven or eight weeks old; they are similar to the old ones in colors, except that they are somewhat paler; the males are larger and much darker than the females.

These animals are not confined to the lower hills but range up to the verge of the snows.

I have a fine male specimen which was shot near the snow, and a female which I caught in a trap at *Simla* in May. She had evidently cubs not far off.

Canis aureus. The jackal is found also in the valley of the *Pabbar*. We saw several in the rice fields near *Shèrgaon*. At *Simla* I have often heard the cry, or what is said to be the cry, of the female, but the male, never, although I have seen them. They do not appear to hunt in packs as they do in the plains, but are seen singly.

Langoor. *Hanumán*. Entellus monkey. *Semnopithecus entellus*.

This species is found at *Simla* all the year through, but when the snow falls during the winter it seeks a warmer climate, in the depth of the *khads*, returning again to the heights as it melts away. I have seen them however, in a fine sunshiny day even with the snow on the ground, leaping from tree to tree up and down the hill of *Jakú* at *Simla*, which is 8115 feet.

ROYLE is mistaken when he says, that "the Entellus alone ascends in the summer months as high as 9000 feet." I have seen them at *Nágkunda* in August at 9000 feet, and in winter on *Háttú* mountain which is 10,655 feet; and in winter at *Simla* with snow four or five inches deep, and hard frosts at night, as high as 8000 feet.

Rhesus monkey. *Bundur*. "*Simia rhesus*." This species I saw repeatedly during the month of February when the snow was five or six inches deep at *Simla*, roosting? in the trees at night, on the side of *Jakú* and apparently regardless of the cold. It is somewhat hazardous to walk below a troop of these latter animals, for in searching for acorns and other seeds, they turn up the stones which are apt to come tumbling down on ones head.

The *Langoor* ascends and descends, from and into the *khads* by prodigious leaps from tree to tree, while the less timid *Rhesus* confines itself to the ground and mounts the trees only when pursued or to roost at night.

Flying Squirrel. *Pteromys*.

These are beautiful animals and leap with amazing agility from tree to tree. Their food consists chiefly of the young leaves and tender shoots of the oak tree. They breed in the holes which they gnaw in the trunks of trees and generally have one young one at a birth. When at rest they wrap themselves partially up in the lateral membranes and curl their long bushy tails around their heads, like the common squirrel of Britain. They are easily tamed when taken young. I have offered them various kinds of food, such as grain, wheat, leaves of trees, &c. but although they will eat attah cakes the favorite food appears to be oak leaves. When feeding, they sit up on the hinds legs and hold the food in the forefeet like a squirrel.

I have a living specimen which was brought to me from *Nógkunda*, along with its mother when quite small in the month of February, so that it must have been born in the latter end of January. There is another species much smaller and of a gray color sometimes met with in the interior, but from the few specimens brought in, it appears to be scarce.

The present species is of a deep red brown, interspersed with gray hairs; feet and tip of the tail black. Under parts pale orange.

I have no descriptions to refer to and therefore have not named it.

Wild goat. *Jehr*. *Capra jharal*—HODGSON.

We saw none of these animals during our trip, although our shikáris told us we crossed some of their haunts.

The Ghoral, (*Antelope Goral*), and Kukur or Barking deer, (*Cervus Ratwa*), are also met with at *Simla* and the interior. During the winter of 1835-36, a great number of the latter animals were killed in the snow, which lay in the month of February at *Simla* six to eight feet deep, and had not all melted away in shady places until the end of May!

Wild sheep. *Bharal*. *Ovis ammon*.

This animal is only found in the most inaccessible places among or verging on the snows. Their skins are brought down by the Tartars to the *Rampur* fair in November, and sold at about a rupee a piece. Their horns are presented to *Devi* and are hung up at the temples, or placed upon the cairns alluded to in the journal.

Musk deer. *Kastúra*. *Moschus moschiferus*.

These animals are found in the depths of the forest from *Muhásst* far into the interior. They appear to be shy and solitary animals, lying singly in the most retired places, usually near some steep overhanging rocks. On being disturbed they bound away down the *khads* with great swiftness. The animal is of a dark

gray above, lighter on the inside of the limbs and beneath. The ears are large and usually carried erect. The males have no horns, but are furnished with two long recurved canine teeth hanging over the under lip from the upper jaw. The use of these, whether for defence or digging roots when the snow is lying on the earth in winter, is as yet, I believe, doubtful. The females and young males have neither these teeth nor the musk bag. It is a plump-looking animal and graceful in its movements, and when taken young is easily tamed. The natives of these hills call it "*Kastúra*."

A figure and description of this animal, taken from a specimen in the Edinburgh College museum appears in the "Naturalist's Library." The color is there given as "dark reddish brown," while all the skins I have seen of the musk deer of these hills were dark grey; in old specimens a faint reddish tinge was spread over the upper parts. Neither do the habits of the animal, as stated in that work, as far as I can gather from the hill shikáris and my own observation, agree with those of the animal known here as the musk deer. I transcribe a few lines, the better to point out in what the difference consists.

"Its habits, in fact, are similar to the chamois and some of the mountain goats, climbing and bounding among the precipices of the Alpine ridges of Central Asia with astonishing activity, assembling in herds, and often appearing in very considerable numbers." "They inhabit the region between *China* and *Tartary*, extending to the mountains above the sources of the *Indus*, and northward to near *Lake Baikal*.

At times they appear to migrate from one district to another, assembling previously in large herds. Some zoologists however have considered this assemblage not connected with migration, but consisting entirely of males in search of the female."

The *Kastúra* or musk deer of these hills is to be found in the deep forest shades of *Mahássú* throughout the year; I have seen them found from that place to the *Burenda Pass* and invariably single, sometimes a male, sometimes a female. The information obtained from the shikáris, is that they lie singly at all times except the rutting season, when a male and one or more females may be found together or near each other, but only for a short time. That they are never seen in herds. They breed in May and June at which season the shepherds in the interior catch the young ones.

I have seen the musk deer single in June, August, September, and October, and as they breed in May and June, they have only the most inclement season left for migrating, which is contrary to nature, as animals migrate in order to avoid inclemency. May there not be another species beyond the *Himálaya*?

'The color of the specimen in the *Edinburgh* museum may be owing to the preservation used in preparing the skin!'

It is generally supposed that the musk of this animal has some connection with the rutting season, it being strongest at that time. The idea I think is strengthened from the circumstance of the animal living such a solitary life, as the musk becoming strong at the season of love, is a means of guiding the females to the male, and thus the reason is plain why sometimes one and sometimes more females are found with one male; for in the almost endless forests of their haunts it may sometimes happen that only one or two deer may be found, while at other

times several may be in the neighbourhood. This idea too, is more probable than that the male should seek the female, which being destitute of the musk, could in these immense tracts leave no guide to the male.

The circumstance of the female seeking the male, is by no means an anomaly in nature, for the *Cicada* tribe among insects, and the *Gryllides*, are led to the males by the sharp noise emitted by them.

The same reasoning may apply to the *Civet Cats*, which likewise emit the strongest smell, during the season of love.

Marmot? *Arctomys*?

These animals live in very large societies and feed on grasses and roots. They burrow in the earth like rabbits, to a great depth, and the holes are so connected under ground, that it is almost impossible to dig them out.

During the winter months they remain asleep in their subterranean retreats. They are the tailless rats mentioned by TURNER, HERBERT, GERARD, and other travellers.

Tibet Bear. *Ursus Tibetanus*. These animals are numerous in the interior but only visit the neighbourhood of *Simla* during the winter, retiring again as the weather becomes hotter.

There is another kind of bear among the snowy regions of a dirty sandy color. I once saw a tame one, but foolishly made no note on it.

The natives draw a strong line between the two, and say that the black bear lives on fruits and roots, while the sandy bear eats flesh.

GERARD mentions having seen the latter and says the two are identical.

[A note received while this is in the press adds to the above list of birds and animals found in the *Simla* hills some others known from Mr. HODGSON'S Nepal collection:—the "*Surrow*" or *Eimoo*: the *Martia flavigula* in pairs, decidedly plantigrade—the *Lynchus erythrotis*, HODG. Also a weasel found in villages, like *Mustela vulgaris*. We have not space for particulars.—EP.]

NOTE.—For the altitudes of the different places mentioned I am indebted to the kindness of Captain P. GERARD, residing at Simla.

[We take the opportunity of appending to Lieut. HUTTON's paper a table of barometric heights taken in a trip to the *Burenda pass* by Mr. E. C. RAVENSHAW, C. S. in 1829, which has been some time in our possession.—ED.]

		<i>Baro.</i>	<i>Th.att.</i>	<i>det.</i>		<i>Feet.</i>
May, 18	6½ P. M. Bridge at the Jumna,	27.71	70	67 =	about	2193*
19	11 A. M. Tents at Nagthí,	24.12	74	70 =	..	5795
20	4 P. M. Mukti,	23.984	68½	71 =	..	5805
21	7½ A. M. Thanna Táugra,.....	23.040	66	60 =	..	6851
22	10 A. M. Tents on Deobun,	21.932	62	63	..	7947
24	6 P. M. Bándroulí,.....	24.65	70	67	..	5263

* N. B. In this rough calculation of the heights after deducting .003 of an inch for every degree of heat above 32° in the attd. thermometer, I have allowed 1000 feet for every degree of the barometer below 29.789, (which from the No. 34 of GLIAN-INGS OF SCIENCE appears to be the average height of the barometer at the sea, taken the height of Calcutta at 25 feet as estimated in Lieut. BARNES' letter in the same No.) In NICHOLSONS' or the Edinburgh Encyclopædia only 900 feet are allowed

			Baro. Th.att. det.			Feet.
25	{ Noon at Dhargadh stream,	26.69	74	74	..	3265
	{ 7 P. M. Kandhú,	25.28	66	64	..	4611
26	7 A. M. At the Jhála over the Tonse,	27.02½	60	60	..	{ 2850
27	10 A. M. Earí on the Pabbar,	26.17	77½	77	.. *	{ 3754
28	10 A. M. Temple at Hath,	25.35	84	77	.. †	4695
29	10 A. M. Rárá,.....	24.97	75	72	.. ‡	4948
30	10 A. M. Sérgaon,	24.22	80	76	..	5713
31	4 P. M. Pêka,	22.15	59	53	..	7720
June 1	8 A. M. Janglig,	21.568	64	58	..	8221
	2 3 P. M. Lití,	19.62	52	50	..	10229
	3 9¼ A. M. Crest of the Búran Ghât or Burenda Pass,.....	17.211	56	43	..	12650

II.—*Discovery of the Rekhá Ganita, a translation of the Elements of Euclid into Sanskrit by SAMRÁT JAGANNÁTHA, under the orders of Rája SIWÁI JAYA SINHA of Jaipur. By LANCELOT WILKINSON, Esq. C. S. Resident at Bhopál.*

I lately had the good fortune to procure a copy of the *Rekhá Ganita* or Sanskrit version of Euclid's Elements, which was made by the order of SEWÁI JAYA SINGH rája of Jaipur. This chief, the flower of the Hindu princes of Hindustan, ascended the *gaddi* of Jaipur in A. D. 1699, and died after a reign of 44 years in A. D. 1743. He was distinguished by an ardent passion for the study of mathematics and especially of astronomy, and he did more to promote the cultivation of sound science in this benighted land than any other Hindu prince on record. Some details of his astronomical labours have been published to the European world by the late ingenious Dr. HUNTER in his to a barometrical degree or inch, but as other modes of calculation adopted by GRAHAM give more, I have assumed 1000 feet as a fair standard. With this liberal allowance however the *Burenda Pass* instead of being upwards of 15,000 feet appears to be only 12,650.

* The spot where the observation was taken being about 20 feet above the water and distance between the *Jhála* and *Earí*, about 12 inches, $3754 - 2830 = 924 \div 12 = 77$ feet per mile.

† *Hath* being 50 feet above water and distance from *Earí* 14 miles, $4545 - 3754 = 791 \div 14 = 57\frac{1}{2}$ per mile.

‡ *Rárá* ditto and dist. from *Hath* 8 miles, $4898 - 4545 = 353 \div 8 = 44$ per mile.

N. B. Observed at *Earí* in the evening that the water in *Pabbar* had fallen about $2\frac{1}{2}$ inches since day break. Hove the log in shape of a tent peg, but the rapidity of stream did not prove more than 3 miles per hour, at *Shéryaon*, *Ptka*, *Janglig*, *Lití*. Rain every day about 4 o'clock. Snowy mountains clear in the morning but invariably clouded at noon.

§ We insert this notice with pleasure because it may excite attention to the work; but the *Rekhá Ganita* is not unknown here.—A copy exists in the Sanskrit College, which with a Sanskrit commentary was at Prof. WILSON's suggestion to have been printed; but the *suspension order* put it on the shelf!—ED.

papers in the Researches of your Society and by Colonel TOD in his annals of *Rājputānā*. As a legislator and statesman also he was equally distinguished. His name throughout *Rājputānā* and also in *Mūlwā* is to this day held in the highest veneration by all classes of the Hindu population. The *Mārwarī Suukārs* hold it as an article of faith that good fortune will attend their dealings if they take the name of JAYA SINGH along with that of their gods in their morning orisons.

2. I do myself the honor of forwarding to you a few pages of the Sanskrit work above mentioned containing a prefatory introduction by the translator, the definitions, and a few propositions. I hope that you will be able to find room for it in your valuable and wide-spread Journal. At a time when the friends of education are anxiously busy-ing themselves in collecting vocabularies of scientific terms in Hindī, the publication of even this specimen will not fail to be eminently useful to them; it will afford them the best means of at once enlarging and improving their previous collections of those terms in use amongst Hindu mathematicians of the present day.

3. The preface from its historical allusions has an interest of its own. Of it I have therefore added an English translation. From this, it appears, that the translator was SAMRÁT JAGANNÁTHA a brahman, probably the author of the *Samrát Siddhānta* a treatise on astronomy generally attributed to JAYA SINGH himself.

4. DR. HUNTER mentions that JAYA SINHA had treatises on plane and spherical trigonometry also translated into Sanskrit. But I have not as yet succeeded in procuring either them, or the *Samrát Siddhānta*. My search however has been of but recent date, and I have still hopes that it will not prove fruitless.

5. The copy of the *Rekhā Ganita* I procured from a Rājput of *Oujein* named KULIAN SINGH at present in my service, who formerly held jágire from SINDIA and HOLKÁR, whom he served in the capacity of astrologer and astronomer, and mathematical instrument maker. It contains 14 books complete, and a part of the 15th book; but the diagrams illustrative of the several propositions have unfortunately been entirely omitted. The work of supplying them and the letters with correctness so as to coincide with the explanations in the text, will be a tedious, and in some instances a difficult task.

6. RÁJA JAYA SINGH, in his *Tij Muhammad Shāhi* addressing his work to the learned and well informed Musalmán public, did not venture even to attempt to conceal from it, the obligations under which he was well known to be to the learned Europeans and Muhammadans in his service. Our brahman translator of this work, however is guilty of one of those base acts of plagiarism and literary injustice so

common with all Hindu authors. He coolly informs his readers that the work was originally revealed by BRAHMA to VISWAKARMA; and to himself he attributes the honor and credit of restoring and reviving its revelations, which he says had in the course of ages been lost or forgotten. His object in so doing may perhaps have been rather a desire to secure its acceptance with his countrymen*, than a hope of advancing his own reputation. For at a time when the minds of the whole Hindu nation were burning with a sense of indignation at the ruthless persecutions and oppressions of the wily, bigotted and hypocritical AURANGZÉ'B and his Muhammadan advisers, he may have apprehended the total rejection by all men of his faith of any thing however valuable professedly borrowed from the Musalmáns and their Yunáni teachers. The fact of his hazarding a discovery of the theft, however bears ample internal evidence to the gross ignorance of even all his educated countrymen at this time.

7. The allusion in the 3rd verse to the protection afforded to the learned expatriated brahmans of *Vrindávan*, probably refers to the oppressive persecutions inflicted on the city and brahmans of *Mathurá* by AURANGZÉ'B, by whose orders many temples and the valuable libraries they contained, were destroyed.

8. The allusion in the 4th verse to the courageous labours of rája JAYA SINGH, in removing "the people-grinding impost," probably refers to the obnoxious *juziyá* imposed by AURANGZÉ'B. The honor of procuring its abolition he attributes to his master JAYA SINGH. Colonel TOD has given to ráná RÁJ SINGH the credit of having written that most eloquent, and elegant, and spirited letter of remonstrance against this impost, which has been so admirably translated by Sir W. B. ROUSE, and which is attributed by ORME to JESWANT SINGH of *Márwár*. I have seen nothing in the Persian language of which I would more desire the honor of being the author than of his remonstrance; and if we consult the internal evidence, to what Hindu prince could we with so much propriety attribute the noble sentiments it breathes, as to the enlightened chief of *Jaipur*? To him as well as to JESWANT SINGH I have heard it attributed. Colonel TOD in his partial zeal for the Rájputs in attributing it to RÁJ SINGH would have us regard it as a proof of the enlightenment of his favorite *Ránáwats* of *Udépura*. But if it must be given either to ráná RÁJ SINGH or JESWANT SINGH of *Márwár*, then to their enlightened Musalmán munshis alone can be accorded the credit of the actual composition; for we have no reason whatever

* Had he wished for concealment, he would not surely have retained the Persian order in the letters of the diagrams (see Pl. L.)—ED.

to know that either of these princes were themselves in any degree advanced beyond that state of semibarbarism which then and still distinguishes all tribes of Rájputs.

Translation of the Preface.

Salutation to GANESHA ; salutation to LAKSHMI' and NRISINHA. Upon GANESHA, who is worshipped by the gods, and fulfils all the prayers of men ; who is adorned with all power, and who removes all difficulties, I devoutly call.

2. I humbly prostrate myself at the lotus feet of LAKSHMI' and of NRISINHA, which are adored even by the gods, and the fragrant dust of which is revered by all mankind. I bow in reverence to SARASWATI the destroyer of the darkness of infatuated ignorance, and to my instructor who is distinguished in the science of mathematics.

3. May the illustrious king of kings rája JAYA SINHA, who pure in heart by his own prowess and without dread brought SRI' GOVINDA and the other learned men who had fled from Vrindávan and settled them (in his own neighbourhood), and who has by his own force reduced to obedience Mlechchha chiefs of distinguished rank,—rule long over this portion of the earth.

4. He shines conspicuous by his glorious power, by which he has removed the tax under which the people were grievously oppressed ; he is terrible to his enemies and like the sun in the hot season, not to be endured by them.

5. He performed the *Wujápayá* and other sacrifices, and celebrated also the 16 *Mahádán*, bestowing on the most distinguished brahmans, cows and villages, elephants and horses.

6. For the pleasure of this most illustrious king SRI' JAYA SINHA, the brahman SAMRAT JAGANNA'THA composes this most excellent work called the "*Rékha Ganita*" or geometry.

7. It is a novel and unequalled science, in as much as it teaches from a knowledge of angles clearly to ascertain the measurements of different figures.

8. This treatise on geometry (or mechanics *Shilpashastra*) was originally revealed by BRAHMA to VISHWAKARMA from whom it descended to this earth, and has been handed down from generation to generation.

9. But being lost in the course of time, I, by the commands of the Maharája JAYA SINHA, have again published it to the world, for the delight of all mathematicians.

The *Rékha Ganita* contains 15 books and 478 propositions. In the first book are 48 propositions.

Definitions or EXPLANATION of the terms used.

1. A point is that which is visible to the eye, but is incapable of subdivision.

2. A line is long—but is without breadth : it may be divided.

3. A superficies has both length and breadth.
4. There are two kinds of superficies, the one plane as the smooth surface of levelled water, the other not plane.
5. Lines are also of two kinds, straight and curved (or crooked), &c. &c.

Original Text.

श्रीगणेशाय नमः ॥ श्रीलक्ष्मीनृसिंहाय नमः ॥ गणाधिपं सुरार्चितं
 समस्तकामदं नृणां प्रशस्तभूतिभूषितं स्मरामि विघ्नवारणं ॥ १ ॥ लक्ष्मी
 नृसिंहचरणानुबन्धं सुरेशैर्वन्द्यं समस्तजनसेवितरेणुगन्धं वाग्देवतां
 निखिलमोहतमोपहर्त्रीं वन्दे गुणं गणितशास्त्रविशारदम् ॥ २ ॥ श्री
 गोविन्दसमाङ्गयादिविबुधान्वृन्दाटवीं निर्गतान् यस्तत्रैव निराकुलं
 शुचिमनोभावः स्वशक्त्यानयत् स्नेहान्मानसमुन्नतान् स्वतरसा निर्जित्य
 भूमण्डले जीयाञ्छीजयसिंहदेवदत्तपतिः ओराजराजेश्वरः ॥ ३ ॥ कर्तृ ज
 नार्दनं नाम दूरीकृत्य स्वतेजसा भाजते दुःसहोदरीणां यथायैषो दिवा
 करः ॥ ४ ॥ येनेष्टं वाजपेयाद्यैर्महादानानि षोडश दत्तानि द्विजवर्येभ्यो
 गोयामगजवाजिनः ॥ ५ ॥ तस्य श्रीजयसिंहस्य तुष्टौ रचयति स्फुटं
 द्विजः सम्राट् जगन्नाथो रेखागणितमुत्तमं ॥ ६ ॥ अपूर्वं विहितं शास्त्रं
 यत्र कोणावबोधनात् क्षेत्रेषु जायते सम्यक् व्युत्पत्तिर्गणिते तथा ॥ ७ ॥
 शिल्पशास्त्रमिदं प्रोक्तं ब्रह्मणा विश्वकर्मणे पारंपर्यवशादेतदागतं धरणी
 तले ॥ ८ ॥ तदुच्छिन्नं महाराज जयसिंहाज्ञया पुनः प्रकाशितं मया स
 म्यक् गणकानन्दहेतवे ॥ ९ ॥ अथ रेखागणितं प्रारभ्यते अत्र ग्रन्थे पञ्चदशा
 ध्यायाः सन्ति अष्टसप्तत्युत्तरचतुःशतं शकलानि सन्ति तत्र प्रथमाध्याये
 कृत्वादिशङ्कलानि सन्ति तत्रादौ परिभाषा यः पदार्थः दशनयोग्यः
 विभागानर्हः स विन्दुर्वाच्यः यः पदार्थः दीर्घो विस्ताररहितः विभागार्हः
 स रेखाशब्दवाच्यः विस्तारदैर्घ्योर्ध्वयोर्यद्विद्यते तद्वरातलं तदेव क्षेत्रं तद्विविधं
 एकं जलवत्समं द्वितीयं विषमं अथ रेखापि द्विविधा एका सरला अन्या
 वक्रा अथ सरलरेखालक्षणां यस्यां न्यस्ताः विन्दवः अवलोकिताः सन्तः
 एकं विन्दुना ह्राद्यन्ते सा सरला अन्यथा कुटिला धरातलमपि समं विष
 मञ्च क्षेत्रं समं यथा यत्र विन्दुं लिखित्वा सूत्रं निःसारयेत् तद्यदि सर्वत्र

लक्षं भवति तदा धरातलं समं ज्ञेयं अन्यथा विषमं अथ कोणलक्ष्यं
 धरातले रेखाद्वयोऽगात् या सूची उत्पद्यते स कोणः स च द्विविधः सम
 कोणोऽष्टः कोणश्च समानरेखायां लम्बयोगादुत्पन्नौ कोणौ प्रत्येकं सम
 कोणौ भवतः रेखे मिथः लम्बरूपे न भवतः तत्र समकोणान्मूलनः अल्प
 कोणो भवति समकोणादधिकोऽधिककोणो भवति समातिरिक्तो विष
 मकोणो भवति समकोणस्तु सरलरेखाभ्यामेव भवति (1*) विषमकोणः
 सरलरेखाभ्यां सरलकुटिलरेखाभ्यां कुटिलरेखाभ्याश्च भवति (2)
 (3) अथ क्षेत्रलक्ष्यं धरातलं रेखया रेखाभ्यां रेखाभिवाऽवृत्तं क्षेत्रसंज्ञं
 मुच्यते वृत्तकादंडत्रखचतुरख्वादिभेदेन बह्विधं ज्ञेयं अथ वृत्तलक्ष्यं
 समधरातलं विन्दुं कृत्वा तस्मात्समानां सूत्राणि सर्वतः कृत्वा तस्मादेव
 विन्दुतः सर्वाणि सूत्राणि या स्पृशति कुटिला रेखा तद्वृत्तं ज्ञेयं तदाक्रांतं
 धरातलं वृत्तक्षेत्रं भवति मध्यविन्दुः केन्द्रसंज्ञः केन्द्रोपरिगतं सूत्रं उभ
 यतः पालिसंज्ञं व्याससंज्ञं भवति व्याससूत्रं वृत्तक्षेत्रस्य समानं भागद्वयं
 करोति या रेखा केन्द्रगा न भवति पालिसंज्ञा स्यात्तदुभयतः खंडद्वयं
 विषमं भवति सा रेखा चापकर्णसंज्ञा पूर्णव्याससंज्ञा च भवति (4) अथ
 सरलरेखावृत्तानि क्षेत्राण्युच्यन्ते तत्रादौ त्रिभुजमुच्यते तत्त्रिविधं (5) एकं
 समत्रिबाहुकं द्वितीयं समद्विबाहुकं तृतीयं विषमत्रिबाहुकं पुनस्तत्को
 षोरपि त्रिविधं त्रिभुजं भवति यस्मिन् एकः समकोणः अन्यौ न्यून
 कोणौ तदधिककोणं त्रिभुजं ज्ञेयं यत्र एकः अधिककोणः अन्यौ न्यून
 कोणौ तदधिककोणं त्रिभुजं ज्ञेयं यस्य त्रयोऽपि न्यूनकोणाः तन्मूलकोणं
 भवेत् अथ चतुर्भुजं यस्य बाहुचतुष्टयं समानं अथ च कोण (7) चतु
 ष्टयमपि समानं तच्चतुरखं समकोणं समचतुर्भुजं ज्ञेयं यस्य (8) कोणच
 तुष्टयं समानं अथ च सन्मुखबाहुद्वयं मिथः समानं तद्विषमचतुर्भुजं
 व्यासतश्च ज्ञेयं यस्य कोणचतुष्टयं विषमं भुजचतुष्टयं समंतद्विषमकोणं
 समचतुर्भुजं ज्ञेयं (9) यस्य कोणचतुष्टयं विषमं भुजचतुष्टयश्च विषमं

* The figures have reference to the diagrams in plate L.

तद्विषमकोटविषमचतुर्भुजं ज्ञेयं (10) अथ समानान्तररेखा
 लक्ष्यं वा रेखा प्रथमनिःसारितरेखया कदापि न मिश्रति सा समाना
 तराणा रेखा भवति (11) यावन्तः समकोट्याः ते सर्वे समानाः अथ
 सरणरेखाद्वयं धरातलं व्याप्तुं नशक्नोति (12) कुटिलं रेखाद्वयं (13)
 अथवा कुटिलसरणरेखाद्वयं धरातलं आवृणोति यत् (14) रेखाद्वयं
 समानान्तरं न (15) भवति किन्तु विषमाम्तरं भवति (16) तत्र यस्मिन्
 प्रदेशे वज्रतरं भवति (17) तद्विधिं वर्द्धितयोरेखक्षेपंतरमुत्तरोत्तर
 अल्पमेव भवति यावन्नेखासंयोगं तदनन्तरमंतरं वर्द्धिष्णुर्भवति यत्र
 कोणशब्दः तत्र सरणरेखाकृतएव कोणोज्ञेयः यत्र रेखाशब्दस्तत्र
 सरणैव रेखा ज्ञेया यत्रभूमितलशब्दः तत्र जलसमीकृतमेव भूतलं ज्ञेयं
 इतिपरिभाषा अथ प्रथमक्षेत्रं यदासमत्रिभुजं क्षेत्रं कर्तव्यं भवति
 (18) तत्र अक्षरेखा ज्ञातास्ति तदुपरि त्रिभुजं क्रियते तद्यथा (19)
 अक्षेत्रं कृत्वा अवस्थासार्द्धेन वृत्तं कार्यं एवं बर्कोत्रकृत्वा न अवस्थासार्द्धेन
 वृत्तं कार्यं यत्र वृत्तद्वयसंपातः तत्र अचिह्नं कार्यं तत्र अक्षरेखा वक्षरेखा
 कार्यी अवजत्रिभुजं जातं समानत्रिभुजंकुतः अक्षरेखा अक्षरेखा समा
 नास्ति यतः वज्रवृत्तस्य व्यासार्द्धमस्ति पुनः वक्षरेखा अक्षरेखा समानास्ति
 कुतः अक्षवृत्तस्य व्यासार्द्धत्वात् वज्रवृत्तं समानं जातं अवतुल्यत्वात् तस्मा
 द्वक्षरेखात्रयमिधः समानं जातं अथ द्वितीयक्षेत्रं अभीष्टा रेखा कृतास्ति
 तदन्यत्रकृतविन्दुतः तत्तुल्या रेखा कर्तव्यास्ति तत्रविन्दुअचिह्नं कल्पितं
 रेखावज्रं अचिह्नाद्वचिह्नपर्यन्तरेखाकार्या अक्षरेखोपरिसमत्रिभुजं अत्र
 दं कार्यं बर्कोत्रकवजेन वृत्तं जम्भवसंज्ञं कार्यं दक्षरेखा दीर्घवृत्तपाणिमितिता
 भसंज्ञमा कार्या दक्षेनदक्षेत्रकवृत्तवृत्तं कार्यं दक्षरेखा दीर्घवृत्तपाणि
 वसंज्ञमा कार्या त (20) च अक्षरेखा वक्षरेखा वा समाना जाताः कुतः
 दक्षरेखा दक्षरेखा समानास्ति दक्षरेखा दक्षरेखा समाना तस्मात् अक्ष
 रेखावक्षरेखा समाना जाता वक्षरेखा वक्षरेखा समाना तस्मात् अक्षरेखा
 वक्षरेखा समाना जातस्त्येति तत्र अथ तृतीयं क्षेत्रं इ वक्ष वृक्षरेखा
 वक्षरेखा च ज्ञातास्ति तत्र वक्षरेखातुल्यं खंडं वृक्षरेखातः भिन्नकर्तव्य

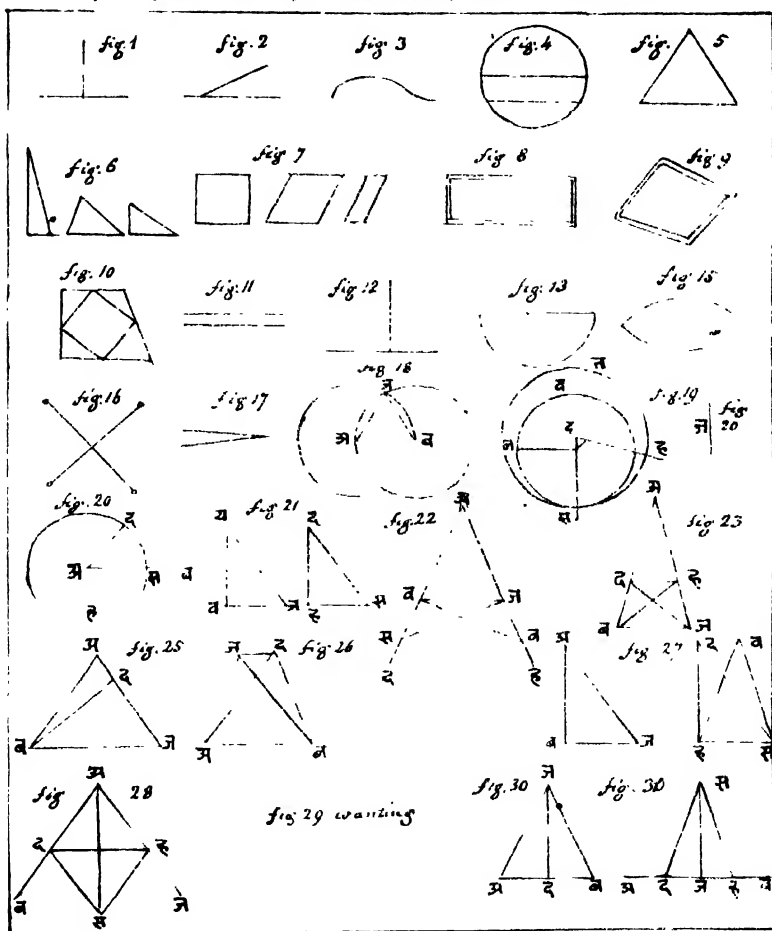
मस्ति तदा वृद्धरेखा अवसंज्ञा जघुरेखा जसंज्ञा कल्पिता अचिन्तात् अद
रेखा जसमानानिकाशनीया पूर्वोक्तप्रकारेण पुनः अं क्षेत्रं कृत्वा अदेन
दृष्टव्यं इदं अवरेखातः अभावेणां (21) अदरेखासमानां पृथक्
करोति तस्मात् अभावेणां जरेखा समाना जाता अथ चतुर्थप्रकरणं ४
यत्र त्रिभुजद्वयमस्ति तत्रैकत्रिभुजस्य भुजद्वयं तदन्तरगतकोणश्च द्वितीय
त्रिभुजस्य भुजद्वयेन तदन्तरगतकोणेन च समानं यदि भवति तदा प्रथम
त्रिभुजस्य शेषकोणद्वयं तृतीयभुजश्च द्वितीयत्रिभुजस्य कोणाभ्यां तृतीय
भुजेन च समानं भवति क्षेत्रं प्रथमत्रिभुजं अवजं द्वितीयत्रिभुजं दृष्ट्वा
अवदंष्ट्रं समं अवजं दंष्ट्रं समं अकोणदकोणौ समानौ कल्पितौ तदा अवजं दंष्ट्रं
समं भविष्यति वकोणदकोणौ समानौ जको (22) अभाकोणौ समानौ
भविष्यतः क्षेत्रं क्षेत्रं समानं भविष्यति अत्रोपपत्तिः वदरेखां दृष्ट्वा
यान्यसेत् अकोणं दकोणे न्यसेत् अवजं दकोणपरिण्यसेत् अवजं दकोणपरिण्य
सेत् एवं कृते अवजं दकोणपरिण्यस्यति यतः रेखाद्वयं सरलमस्ति वजकोणौ
वभाकोणयोः स्यात्यतः क्षेत्रं क्षेत्रं समानं भविष्यति अथ पञ्चमक्षेत्रं ५
यस्य त्रिभुजस्य भुजद्वयं समानं (23) तस्य तृतीयभुजापरिसंलग्नको
णद्वयं समानं भवति भुजद्वयं स्वमार्गवृद्धं सत् तृतीयभुजाधः समुत्पन्न
कोणद्वयमपि समानं भवति यथा अवजत्रिभुजे अवजं समानमस्ति
तदा अवजवकोण अवजकोणौ समानौ भविष्यतः पुनः अवरेखा वर्द्धनीया
दृश्यते हृष्यते अवजरेखा वर्द्धिता ततः समुत्पन्नौ वजवकोण अवजकोणौ
वजरेखाधः स्थितौ समानौ भवतः अत्रोपपत्तिः वदरेखायां अचिन्तां कुर्यात्
जदरेखायां वदरेखाः समानाः जवरेखा पृथक् कार्या वदरेखा जभावेणां
च कार्या अवजत्रिभुजे अवजत्रिभुजे अवजभुजः अवजभुजः अकोणः वज
भुजेन अवजभुजेन अकोणेन क्रमेण समानः जभावेनावजभुजः एतौ समानौ
जातौ अवजकोण अवजकोणौ समानौ अकोणवकोणौ समानौ जातौ
अवजकोण वजकोणौ समानौ अकोणवकोणौ समानौ जातौ अवज
त्रिभुजे वजत्रिभुजे च वजभुजः अवजभुजः अकोणः अवजभुजेन वजभुजेन
वकोणौ न समानौ सन्त तदा अवजकोणः वजकोणः इमौ द्वौ समानौ जातौ

भजवकोऽयः बवजकोऽयः समैः समानौ जातौ एतौ अजभकोऽयः अबवकोऽयः
 योः श्राधितौ श्रेष्ठौ अजव अबजकोऽयौ समानौ भवतः इदमेवास्माकमिदं
 प्रकारांतरेण पञ्चमोऽंशः ५ अबरेखायां द चिह्नं कायः अदरेखा तुल्या
 अहरेखा भिन्ना कार्या दहरेखा दजरेखा हवरेखा च कार्या अदज त्रिभु
 जेदअभुजः अजभुजः अकोऽयः अहवत्रिभुजस्येन हअभुजेनव अभुजेन
 अकोऽयेन क्रमेण समानः बहरेखा दजरेखा परस्परं समाना जाता
 अबहकोऽयः अजदकोऽयश्च एतौ समानौ जातौ बदह त्रिभुजेदबभुजः बह
 भुजः दबहकोऽयः दहजत्रिभुजस्य जहभुजेन जदभुजेन हजदकोऽयेन
 समानः बदहकोऽयः जहदकोऽयौ परस्परं समानौ बदहकोऽयः जहदकोऽयः
 परस्परं स (24) मानः बदजकोऽयः बहजकोऽयश्चैतौ समाना बदजत्रिभुजे
 बदभुजः दजभुजः बदजकोऽयः बहजत्रिभुजस्य जहभुजेन हवभुजेन
 जहवकोऽयेन च समानः अजवकोऽयौ (25) समानौ जाते तदेवमभीष्टौ
 कोऽयौ सिद्धौ अथ षष्ठोऽंशः ६ यस्य त्रिभुजस्य कोऽयद्वयं समानं तत्कायसंब
 न्धि भुजद्वयमपि समानं भवति अत्रोपपत्तिः अबजत्रिभुजे वजकोऽयौ
 समानौ अबं अजमपि समानं यदि भुजद्वयं समानं न भवति एकः भुज
 अधिकः स्यात् तदा अधिकभुजः अजकल्पितः बअसमानं जदं भिन्नं कृत्वा
 बदरेखा कार्या अजवत्रिभुजे अबभुजः वजभुजः अबजकोऽयः दबजत्रिभु
 जस्य दजभुजेन जवभुजेन दजवकोऽयेन समानः वृहत्त्रिभुजं लघुत्रिभुजं
 समानं जातं तदिदमनुपपन्नं वृहत्क्षेत्रं लघुक्षेत्रेण कथं समानं भविष्यति
 तस्मादजं अत्रं समानं तदेवमुपपन्नं कोऽयद्वयसाम्येन तत्समभुजद्वयसा
 म्यमपि भवति अथ सप्तमोऽंशः ७ तत्रैकरेखोभयपार्श्वयोः रेखाद्वयं
 निःक्षतं यत्र मिश्रितं तच्चिह्नादन्यत्र तद्रेखाद्वयमिष्यं भवति अत्रे
 पपत्तिः (26) अबरेखाप्रान्तादन्यादजरेखा वजरेखा च निःक्षता
 जचिह्ने तयोर्योगो जातः अथ यदि तत्समानं अन्यद्रेखाद्वयं अन्यत्र
 चिह्नेमिश्रति इतिक्रम्यते तदा अजरेखा तुल्या अदरेखा वज रेखा
 तुल्या बदरेखादचिह्ने मिश्रिता स्यात् पुनर्दजरेखा निष्काश्या तदा
 अजदकोऽयः अदजकोऽयेन समानः स्यात् कुतः अज अदसमानात् यत् वजद

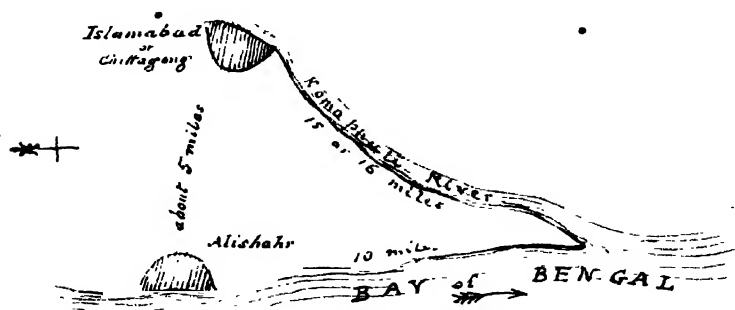
कोणः अजदकोणादस्योऽस्ति वजदकोणः अदजकोणादस्योऽभविष्यति
 पुनःअदजकोणः बजदकोणादस्योऽस्ति वजद कोणः बज कोणादत्यंतं
 अल्पः स्यात् इमैः तु समानौस्तः कुतः बजवजभुजयोः साम्यात् तस्मादि
 दमनपपन्नयतः समानौकोणौ विषमौजातौ तदेवमुपपन्नं जचिह्नादप्यत्र
 भुजयोगो भविष्यतीति अथाष्टमोऽंशं ८ यस्य त्रिभुजस्य भुजत्रयं
 अत्रिभुजस्य भुजैः समानं भवति तदा तस्य कोणत्रयमपि अत्रिभुज
 कोणैरवश्यं समानं भविष्यति (27) तत्रैकं त्रिभुजं अबजं द्वितीयं दहभाह
 कल्पितं अत्र अबदहभुजः समानः अजभुजः दहभाभुजेन समानः वजभुजः
 हभेन समानः कल्पितः यदा भुजत्रयं समानं जातं तदा अकोणः भको
 णेन समानः वकोणः हकोणेन समानः जकोणः भकोणेन समानो
 भविष्यति कुतः यतः वजभुजं हभभुजे स्थाप्यते क्षेपं क्षेपे स्थाप्यते शेषौ
 अबअजौ भुजौ दहदहभाभुजयोः स्यास्यतः यदि न स्यास्यतः तदभिन्नौ ति
 कृतः यथा बहवभौ कल्पितौ तत्रेयमनुपपत्तिः दहदहभरेखे हभरेखा उभ
 यप्रांताभ्यां निःसृते दचिह्ने मिलिते बहवभरेखे पूर्वरेखा समाने प्रांताभ्यां
 निःसृते वचिह्ने मिलिते इदमनुपपन्नं इदं सप्तमोऽंशे प्रतिपादितमस्ति
 तस्मात्त्रिभुजं त्रिभुजोपरि स्थास्यत्येव कोणा अपि कोणसमाना भवंत्येव
 तदेवमुपपन्नं यद्योक्तं अथ नवमोऽंशं ९ तत्र कोणस्य समानभागद्वयकरणं
 प्रदर्श्यते तद्यथा बअजकोणः अत्र कल्पनीयः बअ (28) भुजे द चिह्नं कृतं तत्
 तुल्यमेव द्वितीयेपि भुजे ह चिह्नं कार्यं दहरेखा कार्यं दहरेखोपरि दहभाहं
 समत्रिभुजं कार्यं अहरेखा कार्यं इयरेखा अकोणस्य समभागद्वयं करोति
 यतः दअभत्रिभुजे हअभत्रिभुजे दअभुजः हअभुजश्च मिथः समानः
 दभभुजहभभुजौ समानौ अभां उभयोरेकएवास्ति उभयोस्त्रिभुजयोभु
 जाः समानाः कोणा अपि समाना भवन्ति तस्मात् भअदकोण भअहकोणा
 समानौ जातौ तदेवमुपपन्नं यद्योक्तं यदि भचिह्नं रेखोऽन्तगतं प्रदेशम
 ध्येभवति रेखोपरि वा रेखायाः बहिर्गमने तदेवमुपपत्तिरपपन्ना भवि
 ष्यति अथ भचिह्नं रेखोऽन्तरप्रदेशमध्ये अवश्यं भविष्यति कुतः यदि मध्य
 न भविष्यति तदा रेखायां बहिर्वा भविष्यति तदैतादृशं क्षेपं स्यात्तद

ग्रं तत्र भदहकोणौ समानौ भविष्यतः जदहकोणः व हकोणेन समः भ
चिह्नं यदि वदभुजे पतति तदा दहजवृहत्कोणः दहजवृहत्कोणखंडं
इमौ समानौ जातौ इदमनुपपन्नं यदि भविष्यं वदभुजादहर्भविष्यति
तदा भदहकोणः वदहकोणान्महान् भविष्यति दहजकोणादपि भवि
ष्यति यतः वदहकोणः दहजकोणश्च इमौ समौ स्तः भदहमहान्कोणः
दहभकोणेन समोऽस्ति दहभकोणखंडं दहभकोणखंडं जातं तदिदमनु
पपन्नं यतः खंडं कोणादधिकं न भविष्यतीति तस्मात् भविष्यं भुजयोर्मध्य
एव भविष्यति पुनः प्रकारान्तरेण कोणस्याङ्गीकरणं दवरेखायां भविष्यं
कार्यं दभरेखा तुल्यं हवपृथक् कार्यं भवदरेखे कार्यं संपातस्तस्यैव
नीयः अतरेखा कार्यौ इयं अकोणस्य समानं भागद्वयं करोति अत्रोपप
त्तिः भदह (29*) कोणः वदहकोणश्चैतौ समानौ जातौ दतंहतं समा
नं दह (*) तत्रिभुजं ह्यतत्रिभुजं समानं तस्मात् अकोणस्य भाग
द्वयं समानं जातं अथदशमोच्छेपं १० तत्रयद्रेखायाः समानं भाग इयमपे
क्षितं भवति तदा तद्रेखोपरि समत्रिभुजं कार्यं यथा अबरेखोपरिसमं
त्रिभुजं कृतमस्ति पुनस्तत्र जकोणस्य (30) जदरेखया समानं भागद्वयं
कृत्वा तदाजरेखावदरेखया अपि समानं भागद्वयं करिष्यति अत्रोप
पत्तिः अजदत्रिभुजे अजभुजः जदभुजः अजदकोणश्च दजवत्रिभुजस्येन
वजभुजेन जदभुजेन वजदकोणेन च समानः तस्मात् अदंबदं द्वयमपि
समानं तदेवमुपपन्नं रेखया समानं भागद्वयं अथैकादशोच्छेपं ११ तत्रैक
रेखायां अभीष्टचिह्नाङ्गो निष्काशनीयोऽस्ति यथा अबरेखायां जचिह्नं
दत्त्वा तस्माङ्गो निष्काशितोऽस्ति तद्यथा अजरेखा (31) यां दचिह्नं देयं
जदंतुल्यं जहं कार्यं दहरेखायां समत्रिभुजं दभहं कार्यं पुनः भजरेखा
कार्यौ इयमेव कम्बः अत्रोपपत्तिः दभजत्रिभुजस्य भुजत्रयं हभजस्य
भुजैः समानमस्ति भजदकोण भजहकोणौ जचिह्नस्य समानौ तस्मात्
जस्य दौकोणौ समकोणौ जातौ भजरेखा जं जातः तदेवमुपपन्नं चिह्ना
ङ्गकरणं पुनः प्रकारान्तरेण तत्र अबरेखायां अचिह्नाङ्गकरणं चिह्नी
धितमस्ति तत्रैव ॥

FIGURES OF THE REKHA GANITA EXTRACT.



Position of the TIDE GAGE at Chittagong.



III — *Observations of the Tides at Chittagong made in conformity with the Circular of the Asiatic Society. By Lieut H. SIDDONS, Engineers.*

Tide Registry.						Moon passes meridian.
Alishuhr Beach, July, 1837.						
Times of High water.						
Date.	1st Tide.	2d Tide.	Date.	1st Tide.	2d Tide.	
1	● Passed	mern. S.	16	11 ^h 06 ^m	23 ^h 63 ^m	or 0 03 of the 17th.
2	0 ^h 37 ^m	13 ^h 15 ^m	17	11 58	0 57	
3	1 3	13 55	18	13 23	1 54	● 1 st 23 ^h 31.7 ^m mean time.
4	1 51	14 25	19	14 19	2 45	○ 17 11 58.3
5	2 30	14 57	20	14 57	3 21	● 23 22 45.8
6	2 45	15 12	21	15 21	3 51	
7	3 03	15 35	22	16 27	4 31	
8	3 38	16 04	23	17 17	5 21	
9	4 03	16 43	24	17 51	6 51	
10	4 35	17 38	25	18 42	7 40	
11	6 03	18 48	26	19 43	8 49	
12	7 07	20 17	27	20 54	10 01	
13	8 10	21 10	28	22 11	10 59	
14	9 09	22 06	29	23 15	or a ½ past 11 A. M. of the 30th.	
15	10 03	23 07			Observations stoped by mistake a day too soon.	

All the above are expressed in mean time.

The second tide of the 16th should stand as the first of the 17th, and so on for the remainder.

October, 1837.

Mean Time. D Meridional passage ○ 13th Oct. 11 35 06
● 29th Sept. 24^h 09^m 00^s ● 28th Oct. 23 31 45

1	2h 10m	14h 12m	There must have been a heavy gale somewhere from the 4th to the 8th; the swell here was very great and the times noted so far doubtful on account of the waves.			
2	2 41	14 46	On Wednesday the 4th we had violent squalls of wind and rain; there was no barometer to note the fall, but the atmosphere felt remarkably heavy though chilly.			
3	3 13	15 19				
4	3 46	15 52				
5	4 17	16 24				
6	4 50	16 56				
7	5 26	17 28				
8	6 32	19 29				
9	9 38	21 40				
10	10 31	22 36				
11	11 44	23 49				
12	12 33				
13	0 31	13 19	On the 13th the diff. between day and night flood by Mr. C. W. Mullins was 9 inches, this at the Sudder ghat, Chittagong 12 miles up the river.			
14	1 14	14 0				
15	1 47	14 22				
16	2 23	14 53				
17	2 56	15 24	On the 22nd 3 inches, } According nearly with my own.			
18	3 28	15 56	23rd 2½ inches,			
19	3 48	16 02				
20	4 11	16 43				
21	4 49	17 28				
22	5 50	20 40				
23	8 43	21 42				
24	9 46	22 45				
25	10 48	23 35				
26	11 40				
27	0 20	12 25				
28	0 50	12 52				
29	1 22	13 21				
30	1 48	13 50				
31	2 05	14 15				
1	2 31	No obs.				
2	No obs.	Ditto.				

IV.—*Translation of a Servitude-Bond granted by a Cultivator over his Family, and of a Deed of Sale of two slaves. By D. LISTON, Esq. Gorakhpur.*

Some months ago I was requested by Captain LAWRENCE, under whose charge the survey of the Eastern Division of the district is placed, to furnish answers to statistical inquiries regarding *Sidowa Jobena*, a *paiguna* of *Gorakhpur*, bounding on *Sarun*. I in turn thought of applying for aid in the compilation of the replies to a friend who has been settled as an indigo planter* for several years in *Sidowa*, and who proved to be possessed of a competent acquaintance with the habits and usages of the natives in his neighbourhood.

One of the queries put was, "How do zemindars pay people who water and cultivate lands for them?" The reply was to this effect: "They employ bond servants who are paid at half a cooly's rate, and are at the same time liable to fine in case of absenting themselves from their superior's work." Further inquiry procured me the accompanying bonds or deeds, and as they appear curious and valuable from throwing light on the condition of the agricultural population of this portion of India, I have translated them and now forward them to your address. If you regard them in the same light as I have done perhaps you may think it worth while to publish them in the journal; if you do not think them of sufficient importance for this purpose, pray dispose of them as you may think proper.

The deeds you will observe are blank, but still such as are daily executed and in full force; they were written out by a common village *Putwari*, and are in the rustic dialect or *Patois* of the section of the province where he resides. The spelling you will also see is not ordered according to any very uniform system.

SERVITUDE-BOND.

Translation.

DEED.—ABHEEMAN KOOROOMEE and his children's plough bond for fifty-one rupees written, signed rupees fifty-one, 51.

[Place for the Master's name†.]

WRITING.—ABHEEMAN KOOROOMEE, inhabitant of *Futapoor*, *perguna* *Sidowa Jobena Elaka Sooba Oudes zillah Gorakhpur*, having received a loan of fifty-one (51) rupees from ‡ (the above mentioned individual), I have granted a bond agreeing to pay interest for the said rupees at eight *anas*

* Mr. J. FINCH of *Bubnowli*.

† Mr. FINCH's name is set down in the original which it is hardly necessary to repeat is fictitious.

‡ Blank in original.

per month; for these same rupees I of my own will and accord execute (this) deed of *Hurwueebundhee* (to have force) over my whole family, for the driving of a plough and for remaining always at hand to execute every kind of labour that may occur. If I remain absent a day from my plough or work then shall I be held responsible to the extent of a rutee weight of gold for each day's absence. If I go any where in the manner of flight then let my whole family be seized. If any other person give (me) a greater sum, he must pay at once principal and interest of this loan. That man may then take my family. If he do not give the money then may my family be seized without dispute; any other interfering will be in vain indeed. This is written that the first engagement may remain in force.

Written 29th Falgoon, year 1244 forty-four at *Eme'ia*.

DEED of SALE of two SLAVES.

Explanation and Translation.

ДНОДНО МАНТО *Kumkur* of his own will and accord sells AJUNSI'A and *Rupia*, having executed and delivered a "deed of sale of slaves" signed, or a *mofurkutee loonkutee*.

[I do not find the five or six first lines very intelligible but what follows presents no great difficulty].

The deed commences with the invocation, usual in Sanskrit documents, of *Sosti Sri*; the two first lines are taken up nearly with the enumeration of the titles of VIKRAMA'JIT and of SALIVA'HUN's power. In the fourth line the 43rd year of some king is indicated. ALUNGIR is then mentioned and the 32nd year of Nawab Mirza' AMANI BEG spoken of. Then follows the year of the rule of the Honorable English Company; viz. the 33rd Mr. CURRIE being administrator, (local). The locality *Gorakhpur*, south of which runs the *Ganges* and to the north the *Gunduk*. The country *Bharuthkum*, sirkar *Gorakhpur*, sooba *Aondh*, *Akternuggur*, perguna *Sedooa Jobana*, talooka *Bansguon*, tuppah *Thudheebaree*. The 25th year (of the rule) of Babu ESI KU'MAR SAH (talookdar), the 22nd year (since the establishment) of the English perguna. Sekh JUMALU'NIN being foudar and tehsildar at the tehsildaree of *Peronna*.

In the village of *Buderuha* a sale of slaves was effected. Purchaser UNDO SINGH; amount 43 *Furakabad* rupees. Seller by name ДНОДНО МАНТО *Kumkur**, of his own will and accord he sells BULBHADER's wife† and son, two adults. The woman's name AJUNSI'A, the lad's name *RUPIA*, (this) slavery-bond being executed and delivered. The woman's age 22‡, complexion fairish. *RUPIA*'s age 28, complexion dark, eyes dark. Of these people ДНОДНО МАНТО *Kumkur* has completed the sale, wherever they go, thence they may be brought back, as slaves they are sold to perform every

* The *Kumkurs* are kubars or bearers.

† A slave-holder may sell a whole family, or what part of it may suit is convenience.

‡ In the original the word is thirty, the ciphers twenty-two as here.

kind of work ; wherever they may flee thence they may be seized and brought back without objection or complaint or murmur, without obstacle may they be brought from under the king's or prince's throne ; whoever receives these servants, Hindu or Musalmán he may (legally) be adjured—the Hindu by the sacred cow ;—the Musulmán by HUSEN, hy the Sekh, Seyd, Mogul, Pytan, Sumbut year 1894, month Jet, dark half 13th day, Sunday, year 1244, place *Buderuha*, two ghurees of the day being spent, this was written and signed.

[We have not thought it necessary to insert a lithograph of the Deeds themselves which are in the ordinary *Kayasthí* or *Kaití* form of *Nágari*.—*Ed.*]

V.—*Note on the Malay Woodpecker.* By Dr. WILLIAM BLAND, Surgeon of H. M. S. *Wolf*.

In reference to Mr. Housson's description of three new species of Woodpecker, in your Journal of February last, and agreeing in his opinion most heartily, that *America* cannot shew specimens of woodpeckers superior, nor even equal to those which are produced in India, allow me to send you for his information and others interested in the ornithology of this country, the description and measurement of a woodpecker, shot at the extreme point of the Malay peninsula, in March last. A specimen, to which even the royal Nipalese bird must yield the palm,—and a beautiful and noble bird it is,—in size, strength, and beauty, was preserved and sent to *Scotland* ; but the following description is from my note book.

Body, not including bill nor tail, nine inches long, tail eight inches ; bill, very strong and hard ; ridges, high and sharp, forming at the tip a complete wedge ; breadth at the base 9-10ths of an inch ; height 6-10ths, being 1-3rd more in breadth than depth.

Color, back, breast, neck, wings, upper and under coverts of the tail, and tail itself, glossy black ; belly and under wing coverts yellow ; head crowned with a scarlet erectile crest, and a patch of red feathers behind the under mandible, with a few white speckles on the throat ; tail moderately wedged, consisting of ten strong feathers, worn at the tips, and covered with the juices from trees on which the bird feeds ; a bare space round the eye ; iris bright yellow ; tongue four inches long ; feet large, strong, and zygodactile, with considerable mobility of the outer toe ; spread of wings two feet three inches ; weight twelve ounces. His loud tapping on a tree heard at a considerable distance, led to his discovery, and I had named him "*Picus Maximus Malayensis*."

VI.—*Notes on the Musical Instruments and Agricultural and other Instruments of the Nepalese**. By A. CAMPBELL, Esq. M. D. Surgeon attached to the Residency at Katmandhu.

1.—MUSICAL INSTRUMENTS.

It is almost unnecessary to allude here to the two chief classes of men forming the population of the valley of *Nepal*; but to save repetition, it may not be amiss to mention, that the instruments underneath enumerated, are common to the Newars and the Parbuttiachs, both designations being understood in the widest sense. This difference, however, exists, in the classes of each tribe using them; among Parbuttiachs none but the lowest castes furnish professional musicians, and there are no amateurs of this science among the rude highlanders, who now rule *Nepal*. The Newars, on the contrary are, as a people, extremely fond of music, and many of the higher and middle castes practise it professionally, and indulge in it as amateurs. Their labors in the field are generally accompanied, and their weary return from it at certain seasons, enlivened by the plaintive strains of the rural flute (*bansuli*), or the sharper tones of the *mohalli* (flageolet), and at marriages, births, feasts, fairs, and religious processions, a preceding band of music, is an indispensable portion of the smallest ceremony; nor is it uncommon, on a festival day (of which the Newars have nearly 100 annually) to see a joyous jolly fellow, with his flageolet, or cymbals, as the case may be, trudging along towards the scene of rejoicing, piping a national air on the former, for his own amusement and that of all passengers, or drumming with the latter, in unison to his thoughtless but cheering whistle.

As a general rule, however, professional musicians, among the Newars, as with the Parbuttiachs, are from among the lowest castes, *Kállús* and *Kúsúlliahs*, form the majority from the former, *Damais* and *Sarkis* from the latter.

The instruments used by the people are as follows: I exclude the imitations by the Gorkhas, of British ones, with which their military bands are furnished, the chief of which are the *bagpipe*, made and played on by *Sarkis*. The flute, either English, or imitation of the flageolet, and a variety of horns, trumpets, and bugles.

No. 1.—*Phúnga* (*Newari*), is a trumpet-shaped instrument made of copper, about three and a half feet long, two inches in diameter at its large extremity, and tapering gradually to the mouth-piece, where its bore is diminished to the diameter of $\frac{1}{4}$ th of an inch, it is formed of

* The figures refer to models presented by Dr. CAMPBELL and deposited in the museum.—En.

three pieces, the one fitting into the other, is of very rude workmanship, and costs only about two Nepalese rupees*. The length of this instrument, and its slender make, require some support, when being used; it is consequently furnished with three pieces of stick, which when fitted into one another, form a rod of four feet in length to which the *Phúnga* is attached, by a bit of ribbon, at its expanded end, the rod crossing the instrument at right angles. The player holding the opposite end of the rod in his right hand elevates the instrument at pleasure, bringing it to the perpendicular when used in a crowd, but carrying it horizontally under other circumstances. The *Phúnga* belongs exclusively to the Newars, is called by them, "the musical instrument of the gods," and is played on at every religious ceremony and at every temple, within the valley, when the setting sun gives the signal for the performance of the evening sacrifice.

No. 2.—The *Mohalli* (*Newari*), or Nepalese flageolet. Is rudely executed, and from the most ordinary materials. Its mouthpiece is nothing more than a bit of palm leaf folded, and cut into a convenient shape! the body of the instrument is made of two pieces of sál wood, bound together by slips of the bambu, and hollowed out longitudinally, apertures or stops, (8 in number) being made for the fingers to play on; its trumpet or dilated extremity, is made of copper, gradually increasing in calibre, from the diameter of an inch to that of four inches at its open termination. The complete instrument costs about two and a half Nepalese rupees. The *mohalli* belongs exclusively to the Newars, and many persons of this tribe use it, who are not professional musicians. Its tones are sharper than those of the *bansuli*, or common Indian flute, and the national tunes adapted to it, are lively and pleasing, even to a British ear. To the Newars it seems to sound magically, for it has the power of inducing the poorest and most fatigued laborers, to join in the dance, and it is the constant accompaniment to their songs of merriment at feasts and weddings.

No. 3.—The *Singha*, or *Nar Singha*, the Nepalese horn. It is made entirely of copper, is when put together in the shape of a cow's horn, and about four feet long, is composed of four pieces, and tapers gradually from its wider extremity, where its calibre is four inches in diameter, to the mouth-piece, where the bore is not more than a quarter of an inch across. The *singha* is used exclusively by the lowest castes among the Parbattiahs, and is in considerable demand among the lower castes of the plains of India. Its blast is loud, deep, but not musical, and its professors seem unable to mould its tones into

* A Nepalese rupee worth about 12 or 12½ anas of Company's currency.

any thing like harmony. It is rudely manufactured, and costs about three and a half Nepalese rupees.

No. 4.—The *Nag-phéni*, or *Turi*, a Parbuttiáh instrument exclusively. It is only different from the last in being of smaller size and having three vertical turns in its shaft, like a French-horn. Its noise, for music it scarce produces, is any thing but harmonious. It is made of sheet copper, tinned over, and costs one rupee eight anas.

No. 5.—The *Bansuli*, “or rural flute” of Sir W. JONES. It is much more like the common English fife in its tones, and is identical with it in form; is used by the Newars and Parbuttiáhs.

No. 6.—The *Saringi*. This is the same as the instrument of that name used in India, and represents our European violin, in so far as it is stringed and scraped upon, with a horse-hair bow, but it is at best a miserable instrument. In *Nepal* it is only played on by the lowest caste Parbuttiáhs, and by beggar boys, from among whom I have not seen or heard of any Pagamnis. The dancing girls imported from *Benares* annually for the amusement of the durbar, have their accompanying fiddlers; but these being foreigners, are not alluded to here.

No. 7.—The *Sitar*, or three-stringed guitar of India, is used by a very few persons in *Nepal*, whose proficiency is most wretched. Professors of this instrument from the plains of India find some encouragement from the Goorkhas,—at least an occasional performer of tolerable skill may be heard at their court.

No. 8.—Cymbals of various size, from that of a teacup, to the dimensions of a wash-hand basin, are used by the Newars and Parbuttiáhs, to the same extent as in Hindustan; all religious ceremonies requiring music, all Jattras, or processions of the gods, as well as of marrying, and feasting mortals, are accompanied by the discordant noise of these untuned instruments. They are made of mixed metals, the chief of which is denominated *Phúlia*, and is composed of zinc, copper, and tin, in various proportions, according to the tone intended for the cymbal.

No. 9.—*Múrilli* of the Parbuttiáhs, *Beaugh* of the Newars, is a small clarinet, about nine inches long, with eight stops, made of a single piece of bambu, the mouth-piece being formed by blocking up one end of the canal with a bit of wood, except a small slit through which the air is breathed. The tone of this instrument is sweet, and the airs played on it pleasing and plaintive. It costs about eight anas.

No. 10.—*Dhol* (drum). The same as the Hindustani one, except in the greater length of barrel, in one of the varieties.

No. 11.—*Dholuck*, differs from the *dhol* in having one end only covered with leather, and played on, is used by the Parbattiahs but not commonly; a nearly similar drum, is used by the Newars, and called by them *dishi*.

No. 12.—*Beh* (*Newari*), commonly called *Krishna-beh*. Is the pastoral flute of that god (KRISHNA) so celebrated in history, and so famous in his loves,—is a common reed, with a spoon-shaped shield at the mouth stop: has seven stops along its shaft.

Specimens of these instruments were deposited in the museum of the Asiatic Society of Bengal in January last. I do not feel at present competent to give any correct account of the state of the science of music among the Nepalese. In general it may be stated that the Newars are capable of forming bands, containing performers on all the instruments above enumerated, whose music is far from discordant although of the simplest construction. The orchestra attendant on a Hindu play enacted here last year was upwards of 50 strong, and in some of the melodramatic portions of the performance, the tunes were not only enlivening and harmonious, but of a highly inspiring caste. The Nepalese have no written music, so far as I have been able to ascertain. Among the numerous volumes of Sanskrit literature, collected by Mr. HODGSON in *Nepal*, he informs me there is a very large one of the scenic, and musical acts, which he infers must have flourished very considerably in union with each other, previous to the Goorkha conquest of the valley. In these works the musical science is deemed of sacred origin. The Nepalese music is most probably identical with that of the plains, the Hindu portion of which is traced to the same fountain.

2.—AGRICULTURAL AND OTHER IMPLEMENTS.

No. 1.—The sugarcane mill or press, called *túsá* by the Newars, and *kouli* by the Parbattiahs. It is of very rude and simple construction, but efficient enough for its purpose, among a people who are as yet content to go without the aid of horses and bullocks in the labours of husbandry and mercantile transport. The sugarcane grown in the valley, is for the most part, a small slender species of this plant, which ripens in the months of December and January, when its juice is expressed and evaporated to the semi-crystallised form of *gár*, being scarcely further treated by the Newars than to the attainment of this coarse saccharine matter. All the *chini* (soft sugar), and *misri* (candy sugar), used in *Nepal* and its neighbouring portions of *Thibet*, is imported from the plains of Hindustan.

The *túsá* stands in the open air, either at the house of the cane-grower, or more commonly in the field, where a small shed is erected for covering the evaporating boiler, and storing the jars of *gúr*. It is formed as follows:—Two rough and strong posts $2\frac{1}{2}$ feet apart, of any common wood, are sunk in the earth, to such depth as will secure their fixedness under the heavy strain of the squeezing lever; these posts, which stand about six feet above the surface, are connected by two horizontal beams, of considerable strength, the lower one being about two feet from the ground. In front of these upright and horizontal beams, and at about three feet distance, two other posts of three feet above the surface are sunk, the space between them being occupied by the shorter limb of the squeezing lever which plays on a wooden axle, passing through the shorter limb, and the smaller posts. On the top of the smaller posts, and on the lower one of the beams which connect the larger posts, is laid a thick plank of heavy wood $2\frac{1}{2}$ feet broad, and about six feet long, its surface being grooved transversely at one end, and having a channel cut along the sides, for carrying off the expressed juice, towards the opposite termination of it, which is perforated and lies immediately over an earthen vessel sunk in the ground for the collection of the fluid. Over the grooved end of the lower plank, and under the upper beam which connects the larger posts, a thick plank about two feet long is laid, which forms in fact the upper *millstone*. The sugarcane being cut into pieces of a foot long is placed between these thick planks, the upper one being pulled down by the depression of the longer limb of the lever; the upper plank and the shorter limb of the lever connected by a strong rope or strap of leather. The lever is precisely the same as that used in *Behar* for emptying wells, without the addition of a weight at the extremity of the longer limb, and a rope for depressing it. The Newar sugarcane-squeezer is content to climb up to the elevated limb and by the weight of his body in the air and strength of his arms when he reaches the ground, to depress it.

The sugarcane juice is evaporated in common earthen vessels until it assumes the proper thickness, when with scarce any purification it is stored up for use. The dry juiceless cane is used as fuel by the poorer natives.

No. 2.—*Chíkou-sá*, the oil-press of the Newars. This machine is even more rude than the former, being actually little more than two logs of wood so placed as to be capable of being separated, for a small space at one end, and again approximated, without any mechanical aid save the very poorest. The *súrmi* (oil-maker) builds a house for his

press, and, like the Scottish miller, has frequently an allotted district, from which grist comes to his mill exclusively. He sometimes purchases oil seeds, and becomes a large dealer in the article, but most commonly he depends for his sustenance, on the payment by the small farmers, of a portion of the oil, from that made at his mill, which he converts into money. The machine is made and worked as follows:—Two strong wooden posts (of which about three feet are above the surface) are driven at three feet asunder into the earthen floor of the press-house and connected by a horizontal beam, under which, and over a moveable log lying on the ground, one end of the logs forming the *press* proper are placed. The logs, each about 16 feet long and 18 inches in breadth and depth, are laid parallel to one another, secured at one extremity as above mentioned, the opposite one from the operator being free and admitting of being separated to the extent of eight or ten inches for the introduction of the oil-furnishing seeds. The apparatus for forcibly bringing in contact the logs separated for the introduction of the grain consists of first, a stone pillar sunk in the ground, against which one of the logs rests; second, a strong rope encircling the stone pillar and passed underneath and over both logs through which the end of a long wooden lever is passed, by the depression of which the logs are approximated; third, a rude stair on which the oil-pressers ascend to grasp the end of the lever and from which they depress it, until the ground comes within reach of their footing; and fourth, a wooden peg passed through the lower part of the stair, for the purpose of holding down the depressed lever until the oil ceases to drop from the expressed seeds. The seeds (mustard is the chief) having previously been pounded in a large wooden mortar, and toasted on a large stone kept hot by a subincumbent fire, both being in the same house with the oil-press, are put (to the extent of eight or ten pounds) into a bambu wicker basket, which is introduced between the large horizontal logs. This being accomplished the operators, two or three in number, ascend the rustic staircase, and seizing hold of the erected extremity of the lever, hang by and pull it by turns, until their united efforts succeed in depressing it, when a portion of oil is obtained. An earthen vessel lying on the ground receives the oil as furnished. The Newars know not the superiority of cold drawn, over hot drawn oil, or at all events, do not manufacture the former. The oil seeds are generally three times pounded, and toasted, and as often put into the press; when thoroughly exsiccated, they are carried home and given (as in Europe) to cattle, as well as to poultry. The Newar women use this oil-cake, or oil grains, in

washing their hair, in the same way as the females of Hindustan employ the *aulah*.

No. 3.—The water-mill, *Pan-chuki* of the northern Doab and western hills, *kan* of the Newars,—is so well described in the 19th number of the Journal of the Asiatic Society, as used in the Doab, that I shall only notice the slight points in which the *Nepal* one differs from the other. Of the Doab one it is said, “a horizontal water-wheel with floats placed obliquely so as to receive a stream of water from a shoot or funnel, the said float boards being fixed in a vertical axle passing through the lower millstone, and held to the upper one by a short iron bar at right angles, causing it to revolve with the water-wheel ;—*the axle itself having a pivot working on a piece of the hardest stone that can be procured from the shingle near at hand* :—this, with a thatched roof over it, and the expense and trouble of digging a cut, so as to take advantage of a fall of water, are the only articles required in this very simple mill.” This description is correct for the *Nepal* mill, with the exception of the contrivance for a pivot on which the axle turns, and that for a cup for the reception of the said pivot. Instead of a rounded *pebble* being sunk into the lower end of the arbor, and a larger stone being embedded in the horizontal beam, or transom, on which the pivot revolves, we have in the *Nepal* one, an *iron* pivot driven into the nave of the water-wheel, and a square piece of the same metal sunk into the transom, and its upper surface hollowed out for the pivot to revolve in. In all essential respects they are the same, and alike rude in construction. On this point I am enabled to speak from personal observation, as I have had many opportunities of examining the water-mills of the *Dehra Dhoon*, and western hills, as well as those of the valley of *Nepal*.

The water-mill does not supersede in *Nepal* the use of the common hand-mill, as the latter is to be found in almost every cultivator's house, and exactly similar to the one used in the plains of India ; viz. nothing more than a couple of circular stones, about 18 inches in diameter, the superior one resting on a pivot fixed in the lower one and having a peg of wood driven into it, by means of which it is made to revolve on the other as it lies on the ground. Mr. ELPHINSTONE found the water-mill with a horizontal water-wheel immediately below the millstone in general use beyond the Indus, and says that it “is used all over *Affghanistan*, *Persia* and *Turkistan*.” Throughout the hills from the *Sutlege* to the *Mitcher* or eastern limits of *Nepal*, its use is general, and has been so in all probability for a long period of time. More recently this kind of water-mill has been introduced into our

territories in the northern *Doab*, which lie along the upper *Jumna*, and so great is its simplicity, adapting it to the appliances of the most ignorant natives, "that it has been adopted generally in all the canals in the *Delhi* district, as well as in those of the *Doab**."

A similar mill is said to be used in some of the most northern of the *Scottish* islands, as well in *Provence* and *Dauphiny*.

The power of the *Nepal* mill is not by any means great, nor is there much inducement for the improving of it beyond its present state. Wheat in *Nepal* holds a very low place among the farinacea in comparison with rice, in consequence of the better adaptation of the soil for the latter grain; and so small is the consumption of *atta* (meal) that the miller cannot depend on his craft, as an only means of subsistence. As an average of the power of these mills, the produce of one after 24 hours' grinding ranges from 7 to 10 *muris* of meal, (14 to 20 maunds about,) the latter quantity being considered the maximum produce of the best.

The earnings of the miller are for the most part in kind, and the rate of payment varies according to the supply of water at the time of grinding, as well as with the quantity of grain brought by an individual. The highest rate for grinding is an $\frac{1}{8}$ th of the produce, the average one is $\frac{1}{10}$ th, and the lowest $\frac{1}{12}$ th, this being for grinding alone, as the proprietor of the grain transports it to, and from, the mill.

The payment in kind for grinding corn is, I believe, universal in the hills, it is customary in the *Delhi* territory of India, and I can vouch for its being the invariable mode throughout a large portion of the highlands of Scotland. The rate of remuneration in the latter country was in 1827 $\frac{1}{12}$ th for grinding oatmeal, $\frac{1}{10}$ th for grinding barley meal, and $\frac{1}{20}$ th for grinding malt, which had paid duty; a good deal more for the smuggled article, as an indemnification to the miller for the risk run in admitting the contraband to his premises.

No. 4.—*Ka*, (*Newari*;) *kodali* of the Parbattiahs. The hoe or spade with which the Newars turn up the soil of their fields. They do not use the plough, and compared with the Indian one (which is used by the Parbattiahs), this spade is a much more efficient instrument. Its cut is from 4 to 6 inches deep. The Newars use it with dexterity and delve a field in surprisingly short space of time, turning the earth up in ridges, or narrow beds. The *kú* resembles our

* See Journal Asiatic Society, No. 19.

† *Murwa*, *kodu*, Indian corn, and a little rice is ground by these mills besides wheat; the ground rice is used for making sweetmeats.

adze, more than a spade, but differs from the former in having its handle projecting from the off side of the neck of the instrument. The delver holds the handle in both hands, and stooping forward raises the spade at each cut above his head, bringing it down strongly and steadily and cutting the sod rather slantingly, can make a furrow in well moistened ground of 9 inches deep. The ground for both crops of rice and for wheat, has two or three delvings. So soon as one crop is off the ground the Newar turns up his field for another one, thus gaining all the advantage from the decaying stubble, which early ploughing can give*. This immediate turning up of the soil is a matter on which the Newars lay much stress, and consequently it is very common to see the women and children of the family cutting down wheat and rice, at one end of a field, while the males are delving it from the other. The *kú* costs about one current rupee.

No. 5.—*Kurmúghan*, (*Newari*.) The wooden crutch-like instrument used by the Newars for breaking down the clods, and preparing the soil for receiving seed. With this they reduce the earth to the finest powder; it is all they have for serving the purpose of our iron rakes and harrows, nor is it inferior to them in the hands of the very hard-working and skilful husbandmen who use it.

No. 6.—*Kúchi-múghán*, (*Newari*.) The instrument used for covering over sown wheat, and *gayha* or upland rice, is a block with an upright shaft, used like a pavier's block. The *gayha* variety of rice is suited to dryish lands, is not transplanted, but laid down in seed, most carefully and laboriously, with the fingers. When sown thus, the ground is beaten down gently with the *kúchi-múghán*.

No. 7.—*Chussú-múghán*, (*Newari*.) A thin-edged wooden shovel, used for smoothing the flooded beds in which the seed of the *malsi* and *tóli* varieties of rice is sown, for the purpose of furnishing transplants or seedlings. It is also used in the suburban fields, devoted generally by the Newars to the raising of culinary vegetables, pepper (red), ginger, &c. &c. where it is necessary to prepare the soil carefully and finely.

No. 8.—*Kúkitchu*, (*Newari*.) A small broad-pointed hoe, used by the Newars, for weeding the flooded rice.

No. 9.—*Chong-kúki*, (*Newari*.) A sharp-pointed hoe, used in weeding the *gayha* or dry land rice, *úrid* (a vetch), and other drill crops.

N. B. Nos. 8 and 9 are iron instruments, with wooden handles.

* Sir HUMPHREY DAVY, proved chemically the advantages of using vegetable manures fresh, and the practice is now general in England.—See his *Lectures on Agricultural Chemistry*.

No. 10.—*Kúe*, (*Newari*.) A clumsy wooden shovel, used for spreading grain to the sun and collecting it in heaps after its removal from the straw. The Newars do not use the flail in threshing their corn; there are two modes in use; in separating the *malsi* rice from its straw, nothing is required beyond the shaking of the sheaf, and a few knocks on the ground, in consequence of the preparatory treatment undergone by this crop (or a great part of it). After being cut down it is stacked on the field and left to become heated, and to ferment for 6 or 8 days, after which the stacks are pulled to pieces, and the grain separated from the straw, winnowed by being shaken to the wind from a shallow platter made of mat and bambu and dried in the sun. The grain thus treated is called *hukwa*, and is much liked. The other mode, and the one employed at the wheat, vetch, and gnyha rice harvest, is simply beating out the grain with a long stick, as it lies on the ground. All the grain in the valley is separated from the straw on the field, and carried home after being winnowed, in bags and baskets, carried banghywise or suspended from a stick, borne on the shoulders. The crops are reaped with the sickle, which instrument is similar to the European scythe sickle but smaller. The Parbutials, in common with the Newars, use this instrument and rarely pull up the crops by the root, as is the practice of the Plains.

No. 11.—*Lusi-doh*, (*Newari*.) The large wooden pestle and mortar, universally used in India, for husking grain. A block of hard wood three feet long and 15 or 18 inches in diameter, shaped rudely like an hour-glass, and hollowed from one end down to the middle, is all that is required to form the mortar. The pestle is about four feet long, rounded for about a foot in the middle, and squared on three sides at both ends; it is used by one or two persons, the centre portion held in the hand, and either end employed for beating the contents of the mortar. This machine is employed principally in *Nepal* for making *chúra*, or the bruised rice, so much eaten in all rice countries of India, when the people are travelling, or from other causes unable to procure time or fuel for regular cooking. The *chúra* is made thus: the rice in husk (*dhan*) being steeped in water for a day and night is toasted for a short time on a stone or large tile heated for the purpose; when thus parboiled, and while still soft, it is thrown into the wooden mortar and bruised into thin flat flakes, in which state, having previously been separated from the husks and dried, it is sold in the shops, and eaten by the people. A native of *Nepal*, or of *Bengal* and *Behar*, will be satisfied to live on this substance alone for many days together: a small quantity of *sukur* (unpurified parti-

ally crystallised sugar) added, gives it a most grateful relish, to the rarely stimulated palates of these poor and primitive people.

No. 12.—*Kúti*, (*Newari*.) The machine for converting the *dhan* into eatable rice, by husking it, is the same as that for making *sárki* from bricks, (hence called the *Dhenki* ?)

No. 13.—*Chan-kummú*, (*Newari*.) Is the banghy used in all field work, and consists merely of two small wicker baskets, suspended from either end of a piece of wood or bambu, four feet long, which the carrier bears on his shoulders.

N. B. Exact models in wood of the above noted implements, are deposited in the museum of the Asiatic Society of Bengal.

VII.—*Note on the Facsimiles of the various Inscriptions on the ancient column at Allahabad, retaken by Captain EDWARD SMITH, Engineers.*
By JAMES PRINSEP, Sec. As. Soc. &c. &c.

[Submitted at the Meeting of the 6th December.]

Captain EDWARD SMITH, of the engineers, has rendered another signal service to the Society and to all those whose study is directed to the development of Indian history. On this occasion his task has been infinitely more trying to the patience, and has demanded more ingenuity and care, than in the comparatively simple affair of *Bhilsa* : while on the other hand there was less expected from its accomplishment ; seeing that Lieutenant BURR had already taken down the two principal inscriptions by hand, one of which had been published and interpreted with the advantage of all the learning and critical acumen of Captain TROXER and of Dr. MILL himself : while the other and older text had been shewn to be identical with the four tablets of the *Feroz lút*, and was therefore included in the explanation of that monument recently given. Nevertheless, experience rife and frequent had taught me the value of a strict revision, even of the most trust-worthy labour of the treacherous eye ; and I was equally surprised and pleased to find that Captain SMITH had devoted himself to this unpromising labour. There were many discrepancies of letters in Lieutenant BURR's copy of the No. 1. inscription, which might be satisfactorily rectified ; there were also many obscurities in the *Samudragupta* inscription, which might be cleared up ; and above all, it was an object to determine the nature of the interlineary inscription to which the attention of the curious had been directed first by Lieut. KIRTON,

and which was subsequently confirmed by Mr. WALTER EWER's inspection, as reported to the Society by himself more than a year ago.

To perform the operation in the most complete and engineer-like manner, Captain SMITH divided off the written part of the column into six lengths, and each of these again longitudinally into four quadrantal subdivisions, so that the whole surface of the stone could be printed off upon twenty-four large sheets of paper or cloth. Each paper was made to extend somewhat beyond the actual limit of the compartment so as remove any uncertainty in regard to the letters near the edge.

"On the system followed at *Bhilsa*," writes the author, "I have taken off no fewer than three impressions, that the success of one may supply parts of less happy execution in another. One impress is on cloth, and two are on paper, and together I think they give the inscription as perfectly as any inspection of the stone itself: more distinctly indeed I may say, for the relief of the colored ink brings out the characters with a precision not perceptible on the pillar."

Of these one paper and one cloth impression have been transmitted to *Calcutta*, the third being reserved in case of accident to them on the road. When united together the lettered surface measures nearly thirty feet long by nine in width, and comprehends a written superficies of 160 square feet!

Upon their arrival in *Calcutta* I lost no time in unfolding the roll and connecting the whole of the paper series (which seemed to have received the strongest print) into a continuous sheet, an operation rendered extremely easy by the tickets and directions accompanying them.

Our former review of the sculptured surface of the *Allahabad* pillar had divided the Hindû writing into three heads, that in the ancient or No. 1 character then unknown; that in the No. 2 or *Gaya* alphabet; and a third in the modern Deva-nâgarî, consisting of a multifarious and uninteresting collection of scribblings and names. The same classification may still be retained, although we may now conveniently exchange the numerical designations for specific names, more especially as there will be presently shewn to be an intermediate class of writing between Nos. 1 and 2; of which similar evidence was furnished among the *Bhilsa* fragments.

Commencing then my inspection with the ancient Buddhist character (No. 1), I had the satisfaction to find that most of the slight discrepancies before remarked, between Lieut. BURR's version and the published *Delhi* text, disappeared on a careful scrutiny. The few instances of preferable reading or correction of the *Feroz* record which did

occur, I have collected as emendata in the subjoined note*. To a few of them I must however take the liberty of alluding more particularly.

In the first place, it is evident, although it escaped my notice before, that the final *è* of many words is the representative of the Sanskrit *visarga*, and not solely of the seventh case as I had imagined, or of the plural as in the Hindustání. Thus in the opening words, *Devánampiyè Piyadasi* represent the Sanskrit देवानाम्पितः प्रियदर्शिः the *yè* and *sè* stand for यः and सः and consequently govern singular verbs, as, *yè cha sampatipajisati sè sukatam kachhati*: *yè paṭibhogam no 'ti* :—&c. Again in the catalogue of birds and animals prohibited from being eaten we find that all those ending in *è* agree with the Sanskrit masculine nominatives as *sukè, arunè, chakavákè, &c.* while *sáriká, jatuká, ajaká, eḍaká,* are agreeably to Sanskrit analogy feminines. Attention to this circumstance may help to determine some of the doubtful animals; thus *arunè* (not *arane* wild) is most probably the *अरुणः* of Sanskrit poetry, the fabulous elder brother of *garudu* the bird of *VISHNU*: the pandits say it is the adjutant. Again the *Allahabad* text has *anaṭhika-machhè*, valueless fish; and *sankuju† machhè*, shell-born fish; therefore it is plain the paragraph is not restricted to the feathered tribes; and, removing this restriction, we find much more plausible translations for many of the words :—*duḍi* (not *duḍi*) दुडिः a small or

* Corrections or variations observed in comparing the Allahabad facsimile with the published Delhi text.

- NORTH COMPARTMENT, line 5 for *usihéná* and *chakho*, read *usáhéna* and *chukho*.
 6 for *vadhísatichevi*, read *vadhísati cha, vá*.
 7 for *anuvidhiyanti*, read *anu vi dhiyanti*.
 12 for *chakho*, read *chakhu*.
 13 for *vividha*, read *vividhé*.
 14 for *dákhináyè*, read *dakhináyè*.
 15, 16 for *heva, chiran thiti*, and *hotutiti*, read *hevam, chirathiti hotúti*.
 18 for *pápam pápé*, read *pápakam pápakè*, and for *lájá* and *ahá*, read *lájá and áhá passim*.

WEST COMPARTMENT, line 17 for *payihanti*, read *payisanti*.

SOUTH COMPARTMENT, line 2 for *sáyatha*, read *se yathá*.

3 for *arané*, read *arunè*.

4 for *jatuká ambaka pilika dadi*, read *játúka ambákí piliká duḍi*.

5 for *sakujámaré*, read *sankuja machhè*.

EAST COMPARTMENT, line 4 for *hetavakhéti*, read *hita sukhéti*

6 for *héméva*, read *hevam mé vá*.

9 for *mokhyamate*, read *mokhyamuti*.

† It is doubtful whether the *j* has not a vowel *e* also, which would make it *shell-fish*, and other fish.

female tortoise (WILSON'S Dict.)—*ambāka pīlikā*, the mother (or queen) ant:—the *panasē*, monkey; *kaḥhata-sayake*, the crab, the boa; *sesimalē*, the snake, the eel. (?)*

It would be endless to enumerate the instances wherein this simple emendation restores sense to passages that were before only half intelligible. I had indeed before adopted it in many cases (as *etam janē sutā*, एतं जनः सुता, page 599), but without apprehending the invariable rule. The *Pāli* language converts the *visarga* of the nominatives of such nouns into *o*, and the same change is observed in the *Sindhī* and *Zendī*; nor am I aware that the grammatical *Prākṛit* or *Mūgadhī* of the Hindu drama sanctions the use of the vowel *ē* in place of the *visarga*. If *se*, *ye*, *te* are used at all it is either in the dual, or in the plural sense as in Sanskrit, and as in the modern *Hindī Bhāṣha*.

The next remark I would make is on the singular passage *nomina pāpam dekhati, iyam mē pāpēkatēti* (p. 577). The words on the *Allahabad* pillar are *pāpakam* and *pāpakē*; of precisely the same meaning, and therefore establishing the correctness of the translation. The same confirmation of authenticity is deducible from the occasional omission of the verb *huti*, the final *iti*, the substitution of *chakhu* for *chakho* and other minor variations. I have inserted in the annexed plate a few examples of disputed passages, commencing with *hidata pālātē dusamputipādayē*, which terminates the first long line of the *Allahabad* pillar, a sure sign that the sense is there completed, since we have a similar completion of the sentence in almost every line, as may be seen by reference to the original lithograph in vol. III. which I have not thought it worth while to recopy entire.

The five short lines in the old character that follow the *Dharma-lipi* at a short distance below (see Capt. BURN'S lithograph) were the next object of my inspection, I have represented what remains of them faithfully in fig. 1, of Pl. LVI. which will be seen to differ considerably from Lieut. BURN'S copy of the same. The reading is now complete and satisfactory in lines 1, 2, and 5. The 3rd and 4th lines are slightly effaced on the right hand. We can also now construe them intelligibly, though in truth the subject seems of a trivial nature to be so gravely set forth.

Devānampīyasū vāchanēna savata mahāmātā

Vataviyā : Ehēla dutiyāye deviye rānē

Ambāvaṇṇika vā alumeva dānam : Ehevapaṇi . . .

* चमक पीलिका, पनसः कर्कटः, सयकः, शयः मलः. The latter word however more nearly resembles सिङ्गुमारः the porpoise.

† Is the similarity of these two names more than accidental?

Kichhiganiya titiyè deviyè senāṇi sava. . .

Dutiyāyè deviyèti tī valamūtu káruvākiyè

‘By the mandate of DEVANAMPĪYA, at all times the great truth (*Mahā-mātā**) is appointed to be spoken. These also, (namely) mango-trees and other things are the gift of the second princess (his) queen†. And these for of KICHHIGANI the third princess, the general (daughter’s.....?) Of the second lady thus let the act redound with triple force‡,

Unable to complete the sentence regarding the third queen, it is impossible to guess why the second was to enjoy so engrossing a share of the credit of their joint munificence, unless she did the whole in the name and on the behalf of them all!—It will be interesting to inquire whether by any good chance the name of queen *Kichhigani* is to be found in the preserved records of ASOKA’s reign, which are so circumstantial in many particulars. It is evident the Buddhist monarch enjoyed a plurality of wives after his conversion, and that they shared in his religious zeal.

As for the interlineation, it may be dismissed with a very few words. Instead of being a paraphrase or translation of the ancient text as from its situation had been conjectured, it is merely a series of unconnected scribbles of various dates, cut in most likely by the attendants on the pillar as a pretext for exacting a few rupees from visitors,—and while it was in a recumbent position. In the specimen of a line or two in plate LVI. the date *Samvat* 1413 is seen along with the names of *Gopāla putra*, *Dhanara Singh* and others undecipherable. In plate LV. also may be seen a *Bengālī* name with *Nāgarī* date 1464 and a bottle-looking symbol; and another below संवत् १६६१ धर्माज *Samvat* 1661 *Dhama rāja*. These may be taken as samples of the rest which it would be quite waste of time to examine.

It is a singular fact that the periods at which the pillar has been overthrown can be thus determined with nearly as much certainty from this desultory writing, as can the epochs of its being re-erected from the more formal inscriptions recording the latter event. Thus, that it was overthrown, sometime after its first erection as a *Silusthambha* or religious monument by order of the great ASOKA in the

* See page 374. In Sanskrit देवानांप्रियस्य वचनेन (or perhaps rather वाचनम् by his desiring, wishing) सर्वतो महामाया वक्तव्या (fit or proper to be said,) meaning perhaps that this object had been provided for by pecuniary endowment.

† तदेतन् द्वितीयाया देया राज्ञा आश्रयनिका वा अलं रत्न दानम्

‡ द्वितीयाया देया तृतीयवचनस्य कारवाक्य, corresponding as nearly as the construction of the two languages will allow.

third century before Christ, is proved by the longitudinal or random insertion of several names (of visitors?) in a character intermediate between No. 1. and No. 2. in which the *m*, *b*, &c. retain the old form, as in the Gujerat grants dated in the third century of the *Samvat*. Of these I have selected all I can find on the pillar :—they are easily read as far as they go. Thus No. 7, under the old inscription in Plate LVI. is नारुस *narasa*. It was read as *Bahu tatè* in the former copy. No. 8 is nearly effaced: No. 9 may be *Malavaḍi ro lithakaṇḍar (?) prathama dharaḍi*. The first depositor of something? No. 10, is a name of little repute: गणिकाकस्य *ganikakasya*, 'of the patron of harlots.' No. 11 is clearly नारायण *Narayana*. No. 12, चन्द्र भट *Chandra Bhaṭ*. No. 13 appears to be *huluchha seramal*. And No. 14 is not legible though decidedly in the same type.

Now it would have been exceedingly inconvenient if not impossible to have cut the name, No. 10, up and down at right angles to the other writing while the pillar was erect, to say nothing of the place being out of reach, unless a scaffold were erected on purpose, which would hardly be the case since the object of an ambitious visitor would be defeated by placing his name out of sight and in an unreadable position.

This epoch seems to have been prolific of such brief records: it had become the fashion apparently to use seals and mottos; for almost all (certainly all the most perfect) yet discovered have legends in this very character. One in possession of Mr. B. ELLIOTT of *Patna*, has the legend lithographed as fig. 15, which may be read श्रीलोक नावस्य *Sri Lokanāvasya*, quasi 'the boatman of the world.' General VENTURA has also brought down with him some beautiful specimens of seals of the same age, which I shall take an early opportunity of engraving and describing.

But to return from this digression. The pillar was re-erected as '*Samudra gupta's* arm' in the fourth or fifth century, and there it probably remained until overthrown again by the idol-breaking zeal of the Musalmāns: for we find no writings on it of the *Pāla* or *Sārnāth* type, (i. e. the tenth century), but a quantity appear with plain legible dates from the *Samvat* year 1420, (A. D. 1363) down to 1660, odd: and it is remarkable that these occupy one side of the shaft, or that which was uppermost when the pillar was in a prostrate position. There it lay, then, until the death of the Emperor АKBAR; immediately after which it was once more set up to commemorate the accession (and the genealogical descent) of his son JEHAṆGIR.

A few detached and ill executed *Nāgarī* names, with *Samvat* dates of 1800, odd, shew that even since it was laid on the ground again by

general GARSTIN, the passion for recording visits of piety or curiosity has been at work, and will only end with the approaching re-establishment of the pillar in its perpendicular pride under the auspices of the British government. The welcome order has I believe at last been given to Captain SMITH, and there can be little presumption in attributing it to the urgent representations of the Asiatic Society.

The anomalous flourish (No 16) which I before mistook for a peculiar writing, is apparently merely a series of ill drawn *shanks* or shells, a common Buddhist emblem. One was depicted last month, found by Captain BURNES on a Buddhist sculpture at *Hund* near *Attock*.

Let us now turn our attention to the *Samudra gupta* inscription (No. 2.) and see what new light Capt. SMITH's labours have thrown upon it:—and here I most sincerely regret that I can no longer make over this portion of my task to my friend Dr. MILL himself, that we might benefit by the critical acumen with which he would test the numerous alterations suggested or necessitated in the former version by the infallible text now placed in our hands. I must solicit every indulgence for having ventured to undertake the examination myself.

I began by comparing the whole document, letter for letter, with Lieut. BURT's original lithograph and with Dr. MILL's transcript having the Latin interlineation, in the third volume of the *Journal*;—but so numerous were the changes required, that I soon found it indispensable to recopy the original on lithographic paper, and thus to present a fresh edition exactly as it stands on the column, shewing where the stone is peeled off or cut away by other writing, and where the real commencement and termination of some lines can be positively depended on.

First, then, there have been not less than *five* lines erased at the upper part of the inscription. One or two letters in each line can be still readily distinguished by their peculiar form in the midst of the modern *Nāgarī* cut upon the excised parts. No conjecture can be made as to the contents of this portion, but Dr. MILL will doubtless be happy to find that the fragment in the fifth line (the first of the former version) will no longer require the strange interpretation of *ursumque lupus aureus in silvā*, which the BURT copy constrained him to adopt.

In the next place, contrary to Dr. MILL's expectation, the whole of the upper or broken part of the inscription containing ten lines, besides perhaps six erased, proves to be metrical.

The poetical measure is variable: the greater portion is in the *srag-*

dhara chhandah, as lines 2, 3; 6, 7; 12 and 13; lines 8, 9 are in the *mandakrānta* measure; and lines 10, 11 in the *sārdūla vikrīta*; and again at the conclusion of the eulogy, line 28 contains a complete half verse in the *prithvī chhandah*, laudatory of the purifying powers of Ganges water.

Each line contains half a stanza, or two *charanas*. The termination of the first *charana* is well defined by a blank space on the stone. The second *pāda* or versicle of the stanza is generally erased or unintelligible—but in the 3rd and 4th lines* this also is entire.

From line 14 the composition continues uninterrupted in a florid style of prose or *gadya*.

As it generally happens that the construction of each *pāda* is finite and independent, the mutilation of the poetical part does not necessarily prevent the understanding of the general purport, and it is evident that the verse was no less a string of high flown panegyrical descriptions of the prince lately defunct, namely SAMUDRA GUPTA, than the prose continuation; with the sole difference that the latter, governed by the initial demonstrative pronoun *tasya*, 'of him,' is constantly in the genitive case—until the sense is completed in the words *babhuva bāhur ayam uṣṣhrītas stambhas*, 'this lofty pillar,' has become the arm; and then follows *yasya*, 'of whom' still referring to the same person as before, rather than to the pillar-arm itself.

After the apostrophe to Ganges-water above mentioned comes an acknowledgment of the authorship of the panegyric, and of the erection of the monument to his deceased master, by the *dewan* of the young prince (whom Dr. MILL conjectures with great plausibility to be CHANDRA GUPTA II.):—and at a respectful distance the name of the officer by whom his orders were carried into execution; *avasthitamcha*, is the word employed, which from the obscurity of the copy before him Dr. MILL read *senānavitamcha*.

When I mention further that I find no invocation in lines 2, 3, on behalf of the sculptor and blackener of the letters, I have summed up all the changes, and I may venture to say amendments, which Captain SMITH's facsimile has introduced in the *general bearing* of the document embraced in Dr. MILL's analysis, (page 261, vol. III.)

But this is by no means the extent of obligation due to it:—for although lines 13-37 remain as before, eulogistic descriptions of the king in the genitive case, the purport of the greater part is entirely altered; moreover by some unaccountable oversight in Lieut. BURR's transcript the last dozen letters of the 15th line are omitted altogether,

* I adhere to the former numbering of the lines for convenience of reference.

and in their place are brought up as many from the end of the following line; and this transposition continues until the 24th line, where it will be seen that the same dozen letters that close the 23rd line are repeated! It would indeed have been extraordinary, under such unfavorable conditions, had our learned vice-president been able to give a perfect translation! we may rather wonder that he could make any thing at all of such a mass of confusion!

When restored to its natural order we find the epithets applied to the deceased Emperor of Hindustan, not only much less hyperbolic and reposing less upon mythological allusions, but crowding in a short space a most unexpected and curious survey of the political divisions of India at the time, containing even the names and titles of very many of the reigning families, and extending beyond the boundaries of India proper into the regions of the "great king" of Persia and the hords of the Huns and Scythians! It may be poverty of imagination in the poet that has wrought us this good; for once laying hold of an idea he rings the changes upon it as long as he can find words, and then draws up with an inelegant ' &c.' Thus in the 14th and 15th lines he enumerates no less than nine warlike weapons the king's brawny arms were scarred in wielding: and thus when he mentions tributary states he fortunately spares none that SAMUDRA's supremacy could in any degree comprehend! The passage is altogether so curious that I must crave permission to insert a copy of it in the roman character before I endeavour to trace any of the countries alluded to. The continual recurrence of the adjectival termination *ka*, (the prototype of the modern genitive *postposition*) led me to suspect the nature of the sentence.

16. *Kausalaka mahendra, mähakántúraka vyaghra rája, Kaurádrika mapta rája, argháshtapuraka mahendra, mirika-uádyaruka swámi, dat-tairandapallaka dáyana, káncchiyuka viṣṇu, súpávamuktaka* (17.) *Nilarája.*

In this sentence we have the regal designations of nine princes; unless (which is probable enough) the terms *mahendra*, *rája*, *swámi*, *nila rája*, *dayana*, &c. are employed with the same general acceptation of prince, to vary the expression euphoniously.

The kingdom of *Kausala* (or *Kosala*) is well known from the Buddhist authors to be modern Oude*, (*Ayodhya*) or Benares,—*Kási-kosala* of WILFORD. The *Vyaghra mukhas*, tiger-faced people, are mentioned in the *Varásanhita*, among the eastern countries; and *Cántára* a place south of *Allahabad*, but the name may apply to any woody tract

* WILFORD however makes *Kausala* the delta or Sundarban tract of Bengal. As. Res. IX. 260.

infested by tigers. The next name *Kaurádrika* is unknown, nor can the title *Maṇṭa rāja* be well explained. It may be the district of *Curu*, near *Tahnesar*. *Argghashṭapuraka*, the next name, may be construed as the eight cities where due reverence was paid to brahmins:—*Mírika* and *uddyaraka* seem derivable from *míri* cream, and *uda* water, maritime countries;—*dattairañḍaka*, may be some country famous for producing the castor-oil plant;—*Káñchiyaka* may be *Káñchipur*, the golden city in the south mentioned in the *Brahmanda purāna*;—*S'ápa-vamuktaka*, bears also an allegorical interpretation, 'freed from a curse';—as likewise the *rāja's* title *níla* 'the blue':—can the *nílagiri* be his locality? it is one of the mountain divisions of *Jambudwipa* in the *Brahmanda purāna* "like the lapis lazuli gem is the *Níla* mountain*." Thus it may be uncertain whether these are figurative or real names, though it is hardly to be supposed that countries purely imaginary would be introduced as subsidiary to the rule of a man just deceased. The list continues in the same strain:—

17. (*Níla rāja*.) *vaingēyaka hastivarma, pālakka-ugrasena, devarash-traka kubera, kausthalapuraka dhananjaya, prabhriti sarva dakshinaputha rāja griha samājdaugraha janita pratāponmis'ra mūhabhāgyasya*.

All these names, it says, belong to that division of India entitled *Dakshinapatha*, the lowermost of the four equilateral triangles into which the *Mahābhūrat* divides ancient India—the *Dachinabades* of ARRIAN. This division, known to the contemporary of ALEXANDER (EUEMERUS) was still extant in the time of NONNUS. *Vaingēyaka* is a regular derivative from *Vinga*; but neither this country nor *Palak*, are to be found in the Pauranic lists of the southern countries, unless the latter be the country of the *Pullis*†. It must be remarked, that the names of their rulers are circumstantially given HASTIVARMA, and UGRASENA: and following them we have KUBERA and DHANANJAYA of *Daivarashtra*, and *Kausthalapura*, places equally uncertain; though the former has some affinity to *Devagiri* or *Deogir*; *rashtra* implying merely 'country': *Mahārāshtra* might also be understood. *Kusasthalli* is said by WILFORD to have been the name of *Oujein* in the *treta yuga*: TOD names the same place 'on the Indian ocean,' but the general interpretation is *Canouj*, a place out of the limits of the *Dakshinapatha*.

The enumeration continues in the 18th line, as follows:—

Rudradeva, Matila, Nágadatta, Chandruvarma, Ganapati, Nága, Nágasena, Achyuta, Nandi, Bulavarma,—adyaneka Aryavarta rāja, &c. ending with *paricharakikrita sarvadevarājasya*.

* Asiatic Researches, vol. VIII. WILFORD's Essay on Geography, 345.

† Placed by WILFORD in Candeish, and otherwise called *Abhras*.—As. Res. VIII. 336.

Here we have the actual names of ten rājas of India Proper or *Aryavarta*, without their respective countries, as though they were too well known to need insertion. The first, *Rudra*, probably belongs to the *Sūh* dynasty of *Saurashtra*, where the name so often occurs : *Ganapati* is also a family name : but few or none of the others can be identified in the very imperfect lists of this early period.

In the following line we have a catalogue of provinces, whose kings were probably unknown by name to the writer.

19. *Samata, taṣuvakra, kāmārūpa, nēpāla, kartripura-adi pratyanta, nripatibhir maluvārjunāyana, yaudheya, mādraka, abhira, prarjuna, sana kanika kākakhara parikadibhis cha ; Sarva kara dānājñākarana pranāmā-gamana* (20) *paritoshita pruchaṇṭa sisanasya.*

The first five are the names of boundary mountain states on the north-east. The first two names cannot be determined, but the text does not permit Dr. MILL's plausible reading *Sumata dārachakra*, the country friendly to pines. *Kāmārūpa*, and *Nepāla* are well known : *Kartripura* may possibly be *Tripura* or *Tipperah*. Then follow those more to the north and west, most of which are to be found in the lists of the north-west countries extracted by WILFORD from the *Purānas*, and published in *As. Res.* VIII. 340-343.

Mulava he would make the modern *Mālwa*, but this may be doubted as it is classed with *Mādraka*, *Yaudheya*, *Arjunāyana*, and *Rājanya* (? *Prārjuna*) as 'drinking the waters of the *Airāvati* (*Hydraotes*),' and consequently in the Panjāb. *Mādraeu* is placed near *Taxila* or *Takshasila* : *Yaudheya* or the country of *YUDDHA* is very frequently mentioned in the *Purānas*, as lying between the *Betusta* (*Hydaspes*), and *Sindhu* (*Indus*). WILFORD calls it *Sinde Proper*, the *Ayud* of travellers of the 16th century, and *Hud* of the book of *Esther*. It must not be confounded with *Ayodhya* or *Oude* : and it may be here remarked that the *Behat* group of Buddhist coins and sometimes *Bactro-Pchlevi* legends on the reverse, having constantly the word *Yaudheya* on the margin in the old character, certainly belong to this kingdom.

The *Abhiras* are shepherd kings (or more probably hill tribes) in various parts of India ; those here enumerated must be the *Abhiras* of the upper part of the Indus near *Attock*. *Abhisara* is often understood as *Cashmere*, the kingdom of *Abisares*, if we trust WILFORD. The two final names *sana kanika* and *kākakhara* are unknown : the former reminds us forcibly of the *kanirka* of our coins ; and the latter has some analogy to the *kaka bambus* of Gen. COURT's map, to the north-west of *Cashmir*. *Kanuka* appears in WILFORD's list as an impure tribe on the west border.

Passing over the panegyric about his restoring the descendants of long deposed kings, which however is a fact not to be slightly regarded in a historical point of view, we come to another very curious passage :

Daivaputra shāhi ; shāhīnashāhi, saka, murundaiḥ ; sainhādrika adibhis cha,—sarva dvīpavāsibhir, &c.

Here we have a picture of his foreign relations, the nations who used to send him presents, or tribute of jewels, coin, horses, fruit, and even their daughters ! First, *Daivaputra shāhi* (दावपुत्रशही), 'the heaven-descended king : ' this title would apply to the Parthian kings who are styled in the well known triple inscriptions, ΕΚΓΕΝΟΤΞ ΟΞΛΟΝ, and on the common Sassanian coins, "offspring of the divine race of gods." But the two first letters are slightly obliterated and might be read either *Dābha*, or *Dāra-putra* : the latter, 'son of DARIUS' would still apply to the same parties, and this is confirmed by the next words *शहानशही* in which we recognize the very Persian title شاهانشاه 'king of kings,' which prevailed to the extinction of the Sassanian dynasty in the seventh century, so that here at any rate we have a limit to the modernicity of our inscription. Of the *Sakas* so much has been said that it is not requisite to dwell long on them : they are the *Parthians* of WILFORD's chronological table of Indian dynasties ; others identify them with the *Sacæ*, the *Scythians*, the *Sakya* tribe of Buddhist notoriety, and the *Vikramāditya* opponents who introduced the *Saka* era. The *Murundas*, according to WILFORD*, are a branch of the Indo-Scythians who succeeded the Parthians, and in fact the same as the *Hunas* or *Huns*. Thirteen kings of this dynasty, he says, reigned in the northern parts of India. "They are the *Morundæ* of PROLEMY, who were masters of the country to the north of the *Ganges* from *Delhi* to *Gaur* and *Bengal*. They are declared in the *Purānas* to be *Mlechhas*, impure tribes, and of course they were foreigners. The same are called *Maryanthes* by OPPIAN in his *Cynogetrics*, who says that the *Ganges* runs through their country."

Sainhādri, the country of the lion *Sinha*, might safely be identified with *Sinhala*, or *Ceylon* : especially as it is followed by *Sarva-dwīpa*, 'all the isles,' which must refer to the *anca diva* of WILFORD, (the *Laccadives* ?) called by PROLEMY the *Aigidia*† ; but I find a more plausible elucidation in Col. SYKES' memoir on the geology of the *Dakhan*, which informs us that *Sainhādri* is the proper name of the hilly range to which we give the appellation 'Western Ghāts.'

As a proud peroration to this formidable list of allies and tributaries, the poet winds up with the brief epithet words *prithivyām apratira-*

* As. Res. VIII. 113, and table.

† As. Res. VIII. 186.

thasya, 'whom in his war-chariot none in the world can rival or withstand,' the very epithet found on one of the coins of SAMUDRAGUPTA, (*aprativathas*) which I at first read *apatirurha*. However much we may allow for exaggeration it will be granted that the sovereign to whom even a fair share of all this power and vast extent of empire could be attributed, must have exercised a more paramount authority in India Proper than most of its recorded kings. The seat of his own proper kingdom is unfortunately not mentioned, but I think it may be fairly deduced negatively from this very circumstance. *Magadha*, *Ujjayani*, and *Surasena* are omitted; these therefore in all probability were under his immediate rule, and I may appeal again to the frequency of his coins discovered at *Canouj* as a reason for still fixing his capital at that place; his family connection with the *Licchavis* of *Allahabad*, will account for the commemoration of his deeds at that many-roaded (*aneka marga*) focus.

Of what family were SAMUDRA and the preceding GUPTAS, is nowhere mentioned. Dr. MILL's claim to a *Suryavansa* descent for them however falls to the ground from the correction of the epithet *Ravibhuva*, sun-descended, which turns out to be only the verb *babhuva*, 'was.'

But I rather avoid being led into any disquisition upon this fruitful subject, since I agree in all that has been brought forward by the learned commentator on this and the *Bhittri* inscriptions in regard to the CHANDRAGUPTA of neither of them being the SANDRACOTTUS of MEGASTHENES. On the other hand I incline much to identify him with the prince whom the Chinese Buddhist travellers found reigning in the fifth century having a name signifying "cherished by the moon*."

It now remains to give my revised transcript of the inscription at length, along with a translation effected with the aid of my pandit KAMALAKANTA by whom the *Devanagari* text was scrutinized and corrected in a few places, under second reference to the original, which is for the most part beautifully distinct. I have collected all the letters into an alphabet at the corner of the accompanying plate for the guidance of those who would consult the more ancient character. Every letter has been found in the most satisfactory manner; and the only precaution to be attended to in reading is as to the application of the vowel *ā*, which occupies different places in different letters as in the *Silasthambha* alphabet. Thus, it is attached to the central stroke of the *j* upward; to the second foot of the *n*, downwards; to the *ṭ*, horizontally with a curve; to *b*, as a hook on the centre: and to other letters at top in the Tibetan fashion. A few examples are introduced in the plate below the alphabet.

* J. A. S. VI. 65.

- 2 यस्यक्रान्तेविषङ्गाचित सुखमनसःशास्त्र तच्चात्येभोक्तुः...न...नोच्छ
- 3 (भर्तुं) व्यञ्जीविरोधाग्वधगुणितगुणञ्चाहृतानेवहत्वा
दिर्लोको विश्वपातास्फट बज्ज कविताकीर्त्तिराज्यं भुङ्कति
- 4 तदाहृत्यपगुण्यभावपिशुनैरुत्कर्त्तुर्नोरोमभिः
सभ्येषूच्छासितेषु (प्र) तुलकुलजमानाननोद्दी ...
- 5 स्नेहव्याभजितेनबास्य गुह्या तत्वीक्षिता चक्षुषा
यःपत्राभिहितो निविष्टनिखिल
- 6 दृष्टाकर्माण्यनेकान्य नगुजसदृशान्यङ्गतोद्भिन्नहर्ष
भवेरासाद्वयण
- 7 वीर्योत्तमश्च कं चिच्छरिणमुपगते।यस्य वृत्तेप्रणामे प्यति.....
- 8 सङ्ग्रामेषुखभुजविजितानित्यमुच्चप्रकाराः श्वश्वामानप्र
- 9 गोतोत्तुङ्गैःस्फुटबज्जरसस्नेहफुल्लैर्मनोभिः पश्चात्तापाव
- 10 उद्बेलोदितबाज्जवीर्यरभसादिकेनायेनक्षत्रो
द्यान्मुत्पान्यातनागृसेषु
- 11 दण्डैर्यैर्हयतैर्वकोत कुलजंपुष्पन्धायक्रीडता
- 12 धर्मत्पाचीरबन्धाः शशिकरशुचयः कीर्त्तयःसंप्रताना
वैस्यतुषभद प्रयमेर....मुर्ध्नी
- 13 सव्याजःसूक्तमार्गः कविमतिविभवेत्सारगंचयकाश्रय
कोनुस्याद्योस्य नस्य.....
- 14 तस्य विविधसमरशतावतरणदक्षस्य खभुजबलपराक्रमैकबन्धाः
पराक्रमाङ्गस्यपरशु शङ्खगृह्णि प्राशसि तोमर
- 15 वत्सपाल नाराच वैतस्तिकाद्यनेकप्रहरण विरूढाकुल त्रयशताङ्ग
शोभा समुद्ध्योपचित कान्ततर वर्ष्मणः
- 16 कौसलक महेन्द्र महाकान्तारकथाघराज कौराडकमष्टराजार्घा
ष्टपुरकमहेन्द्र मीरिर्कौद्यारक स्वामि दत्तैरगृह्यपक्ष कदयनका
स्त्रेयक विष्णु शापावमुक्तक
- 17 नीलराज वैज्जैयक हस्तिवर्म पालककौयसेन देवराष्ट्रक कुवेर

- कौशिकपुरक धनद्वय प्रभृति सर्वदक्षिणापथ राज ग्रहसमा
जानुग्रह जनित प्रतापोन्मिष महाभाग्यस्य
- 18 रुद्रदेव मलिन नागदत्त चन्द्रवर्म्भ गणपति नाग नामसेना श्रुत
नन्दि बलवर्म्भाद्यनेकार्यवर्त्तराज प्रसभोजरखोदृत्त प्रभाव
महत्तः परिचारकीकृत सर्वदेवकराजस्य
- 19 समतटाडवक्र कामरूप नेपाल कर्तृपुरादि प्रत्यन्त नृपतिभिर्म्भा
लवार्जुनायन यौधेय माद्रकाभीर प्रार्जुन सनकानीक काकखर
परिकादिभिश्च सर्वकरदामाज्ञाकरणप्रणामागमन
- 20 परितोसित प्रचण्डशासनस्य अनेकभयुराज्योत्पन्नराजवंशप्रतिष्ठा
यनोदगतातिवेल भजनोपार्जितयशसः दैवपुत्रघाहि घाहानघा
हि शक मरुखैः सैन्हाट्टकादिभिश्च
- 21 सर्वदोषवासिभिरात्मनिवेदन कन्योपायन दान गरुत्म टङ्गाख
विषयभुक्ति शासन कांचनाद्युपायसेवाकृत बाहुवीर्यप्रसरध
रणिबन्धस्य पृथिव्यामप्रतिरथस्य
- 22 सुचरितशतलङ्कृतानेकगुणगणासक्तिभिश्चरणतलप्रमृष्टान्यनरपति
कीर्तिः साङ्गसाभ्युदयप्रलयहेतुपुरुषस्याचिन्त्यस्य भक्त्य वनतिमात्र
ग्राह्यमृदुहृदयस्यानुकम्पावर्त्यनेकशःशतसहस्र प्रजयितः
- 23 कृपणदीनानाथातुरजाडनेरगामन्त्रदीक्षप्रियगानसिद्धस्य विग्रहा
वताडकानुग्रहस्य धनदवरुणेन्द्रान्तकसमस्य स्वभुजबद्धविजिता
नेक नरपति विभवप्रत्यर्पण नित्यवाक्यतायुक्तपुरुषस्य
- 24 निश्चितविदग्धमर्तक गान्धर्वलपित त्रीडित विदशपति गुरुतुम्बुर
नारदादेर्विद्वज्जनोपजीव्यानेक कार्याक्रियाभिः प्रतिष्ठित कवि
राजबन्धस्य सुचिरानुभूतध्यानेकाङ्गुतोदार चरितस्य
- 25 कान्तसमयक्रियानुविधानमात्रमानसस्य लोकधात्रो देवस्य महा
राज श्रीगुप्तप्रपौत्रस्य महाराज श्रीघटोत्कचपौत्रस्य महाराजा
धिराज श्रीचन्द्रगुप्तपुत्रस्य
- 26 लिच्छविदौहित्रस्य महादेव्यां कुमारदेव्यामृत्युन्नस्य महाराजाधि

राज श्रीसमुद्रगुप्तस्य सर्व्वपृथिवीविजयजनितायै व्याप्तनिखि
लावगितलात्कीर्त्तिमितस्त्रिदशपति

- 27 भवनगमनावानललितसुखविचरणमाचक्षाणः बभूव वाञ्छरयमु
च्छित्तुःक्षमः यस्य प्रदानभुजविक्रमप्रशमशास्त्रवाञ्छादयथोरप
र्य्युपरिसङ्घयोच्छित्तमनेकमार्गैर्यशः
- 28 पुनातु भुवनत्रयं पशुपतेर्ज्जठान्तर्गुहानिरोधपुरिमोक्षशीर्यमिव
पाण्डुगाङ्गपयः ॥ एतच्च काव्यमेवामेव भट्टारकपादानां दासस्य
समीपपरिसर्पणानुग्रहेन्मीलित मतेः
- 29 स्नादृष्टपाक्षिकस्य महादण्डनायक ध्रुवभूतिपुत्रस्य सान्निवियद्विक
कुमारामात्यम (हापात्र) क हरिसेनस्य सर्व्वमूतहित सुखायान्तु
- 30 अवस्थितंच परमभट्टारकपादानुध्यातेन महादण्डनायक तिल
भट्टकेन

Translation.

[Beginning with the *fifth* line, with *yasya* which has reference to a preceding eulogistic epithet in the genitive case. This is numbered verse 2 in Dr. MILL's translation.]

2.....In the midst of pleasurable things happy in body and mind ; le-
vying his revenue in strict conformity with the *śāstras**.....

3.....Destroying unhappiness, and putting an end to those who cause
it ; greedy for eulogistic praise, glory and extended rule :—

4.....Whose enemies amazed at his cavalcade and warlike armament
ask what manner of man is this ?—Among his elevated counsellors.....

5.....Whose eyes filled with the tears of affection, when in consequence
of his written mandate (his son or wife had been recalled ?)

6.....Having seen his former good acts, delightful as nectar, his wife
was much pleased.....

7. Inflamed with vigorous wrath against the presumptuous, but when
submissive.....

8. In battles with his own arm humbling continually those who exalt
themselves.....

9. Cherishing (his subjects) with an affectionate, sweet, and contented
disposition.....

10....The force of his arm being gradually strengthened by youthful ex-
ercise, by himself were killed.....

11. [This verse is too much effaced to be made out.]

12. Whose fame is spread (over the earth), as it were a cloth white as
the moon-beam.....

* Which enjoin that one-sixth of the produce of the land belongs to the king.

[illegible][illegible]

13....The lustre of his skill in well-directed learning (causes exclamations) 'Who is there that is not his?' (he is a fortress) and they are as it were grass upon his ramparts, and much wealth is locked up within him.

14. Of him, who is able to engage in a hundred different battles, whose own arm's strength is his only ally: he with the mighty chest...

15. Whose person is become beautiful from the marks of wounds received, and the scratches caused by his wielding the battle-axe, the arrow, the poniard, the elephant spike, the cestus, the scymitar, the javelin, the club, the iron dart, the dagger* and other weapons:—

16. The sovereign of *Kausala*, the tiger-king of the forests, the *manā rāja* of *Kaurādrī*, the sovereign of *Arghashtapura*, the lords of *Mīri* and *Uddyāra*, the just prince of *Dattairanda*, the *Nīla Rāja* of *Sapāvamuktā†*.

17. The king *HASTIVARMA* of *Vinga*, *UGRASENA* of *Pālak*, *KUVERA* of *Devarashtra*, *DHANANJAYA* of *Kausthalapura*, &c. and all the kings of the southern roads (*dukshinapatha*):—from his favors to all these (I say) becoming more dignified and prosperous.

18. Whose power increases by the force or clemency respectively exercised towards *RUDRA DEVA*, *MATILA*, *NAGADATTA*, *CHANDRAVARMA*, *GANAPATI*, *NAGA*, *NAGASENA*, *ACHYUTA*, *NANĀI*, *BALLAVARMA*, and the other *rājas* of *Aryavarta*:—who has made serving-men of all the *Devā-rājas*:—

19. The magnitude of whose authority takes pleasure in exacting attendance, obedience and tribute from the kings of the neighbouring hilly countries of *Samata*, *Taravakra*, *Kāmarūpa*, *Népāla*, *Karttripura*, and from all the *rājas* of *Malava*, *Arjunāyana*, *Yaudheya*, *Mādraka*, *Abhira*, *Prārijuna*, *Sanakānīka*, (or *Sanaka Anīka*,) and *Kāukhara*.

20. Who is famous for his great aid in restoring (to their thrones) the royal progeny of many deposed *rājas*.

21. Whose most powerful dominion over the world is manifest in the maidens freely offered as presents, the jewels, the money, the horses, the produce of the soil, the ornaments of the precious metals brought as tribute by the heaven-descended monarch, the *Shāhān Shāhi* (of Persia), the *Seythians*, the *Huns*, by him of *Saindhādrī*, and of other places; by the kings of all the isles, &c.:—who mounted on his war chariot has no competitor in the world.

22. Whose majesty exults in the princes endowed with hundreds of virtues and good qualities prostrate at his feet:—a man inspiring fear as of instant annihilation:—altogether incomprehensible;—yet tender-minded to those who are submissive and bow before him; and extending mercy to hundreds of thousands whom he has subdued:—

23. Who lends a willing ear, and a consoling tongue to the case of the poor and destitute, the orphan, and the sick:—is very kind to the brave of

* *Parashu*, *Shara*, *Shanku*, *Srini*, *Prāsa*, *Asi*, *Tomara*, *Vatsapāla*, *Naracha*, *Vaitasti*, &c. I have translated them as described to me, rather than on dictionary authority, for in *WILSON*, Nos. 2, 3, 4, 5, and 9 are all given as varieties of arrows; *vatsapāla*, and *vaitasti*, I do not find, the latter is probably derived from *vaitasa* a ratan.

† A country lately freed from a curse,—perhaps some physical calamity.

his army, is comparable to DHANADA (Kuvera), VARUNA, INDRA, and ANTAKA (Yama*).

24. Who has won and again restored the riches of many kings conquered by his own right hand :—a man who strictly keeps his word, whose accomplishments in fashion, in singing and playing, put to shame the lord of the immortals (INDRA), VRIHASPATI, TUMBURU, NA'RADEA, &c. Who is called 'the king of poets' from his skill in making verses—the livelihood of the learned !—whose excellent conduct proceeds from the observations stored in his retentive memory.

25. Who regularly performs all the established ordinances :—who is a very god among men :—the great-grandson of *Mahārāja Śrī GUPTA* ; the grandson of *Mahārāja Śrī GHATŌT KACHA* ; the son of *Mahārāja Adhīrāja Śrī CHANDRA GUPTA*.

26. Born of *Mahādevī KUMĀ'RA DEVĪ*, the daughter of *LICHAVI* ; *Mahārāja Adhīrāja Śrī SAMUDRA GUPTA* :—how he filled while alive the whole earth with the fame of his conquests, and is now departed to enjoy the supreme bliss and emancipation of INDRA's heaven, this lofty pillar which is as it were his arm, speaks forth :—a standing memorial to spread his fame in many directions :—erected with the materials accumulated through the strength of the arm of his liberality, (now in repose,) and the sufficiency of the holy texts.

(Verse.) The clear water of Gangā that issues from the artificial pool formed by the encircled hair of the lord of men (SIVA) purifies the three worlds.

May this poetical composition of the slave of the feet of the great king, whose mind is enlightened by the great favor of admission to the presence, son of the administrator of punishments (magistrate) DHĒRVA BHUTTI,—the skilled in war and peace, the counsellor of the young prince, the great minister HARI SENA, afford gratification and benefit to all creatures !

Executed by the slave of the feet of the supreme sovereign the criminal magistrate TILABHATTA.

VIII.—*Interpretation of the Ahom extract, published as Plate IV. of the January number of the present volume. By Major F. JENKINS, Commissioner in Assam. (See page 18.)*

At the time of publishing the extract alluded to in the heading of this article, from a manuscript volume in the extinct language of Assam, presented to us by Mr. BROWN, we expressed a hope that ere the volume was complete we should be favored with an interpretation of its meaning through the studies of some of our friends in that thriving valley. Major JENKINS has stepped forward at the eleventh hour to save our credit, having at length as he writes "obtained it through

* Gods of the earth, water, air and fire respectively.

the studies of our *Saddar A'min JUGGORÁM KHARGARIA PHOKAN*, who was however in the first instance obliged to send a copy of the plate to *Jorháth*. It has led him to the study of the *Ahom* language, and perhaps hereafter we may get from him some additional translations."

The text is given by Major JENKINS in the *Ahomí* and in the Roman character word for word with JUGGORÁM's translation; but as we have no type, and as we find upon close comparison that the lithographed version has but one or two discrepancies in the nasals and vowels which will easily be discovered on comparison by the professed student, we must content ourselves with giving the romanized version with the verbal analysis to enable the reader to understand the spirit of this nearly monosyllabic language, and to compare it with other eastern dialects. Each *páda* is marked as in Sanskrit verse by a double line easily distinguished from the letters themselves.

1. *Pin-nang jimmu-tanak teo-fá páimi-din*, ||
2. *Páimi-lep-din mung-sú-teo*, ||
3. *Lái-tyán kúp-kúp mǎi-tim-mung te-jao*, ||
4. *Tāykā khrang-fá freu-páimi nang-hit-tyáo*. ||
5. *Khāk-khāi then-jin-kún*, ||
6. *Kung-ta ai mǎi dāi-ai-nyā tejáo*, ||
7. *Khāpta jéu-káo lak-pin-fá*, ||
8. *Na-ring ba-tyú-mung ti-pun tejáo*, ||
9. *Tan-lan ju-mu pay-ju bān*, ||
10. *Fā ka tak-lā ru-mi-khāi*, ||
11. *Bau-ru fri-deo fān-mān heo-pān-ḍāi*, ||
12. *Khen-klung-rao nang-freng*, ||
13. *Pu-vān tāng-kā mung-rām*. ||
14. *Freu-pai nang-hit-bang*, ||
15. *Kang-ta jéu-kān lak-pin-fá*, ||
16. *Kan-frā fak rang-mung*, |.
17. *Lai-lep ti-pún tejáo*, ||
18. *Khān-ta mǎn-pay jin pin-fá*, ||
19. *Ring-láp mún-khām kai-leng pin-mun-khai*, ||
20. *Fā-pin fr-an-din*, ||
21. *Klem-klem-ak cheng-ngáo*, ||
22. *Khen-Mang-rāo nang-freng*. ||

Translation.

1. Formerly there was neither heaven nor earth but a mass of confusion.
2. There was neither island nor land in the globe.
3. Trees and grass in wild confusion overspread the land.

4. There was no lord over the heavens.
5. There was no human being but the earth was empty.
6. Frosts and frogs formed the food of the forests.
7. God, having transformed himself created the heavens as a spider spins her web.
8. The earth was a thousand *beons* thick.
9. God then rested for a few days.
10. God said, let BRAHMA be created.
11. I know not what deity or genius gave BRAHMA to us but him we received.
12. That same BRAHMA been resting on the sky as a honeycomb.
13. On this account all the world was a chaos.
14. There was no umbrella-bearing king on the earth.
15. God in the same manner as a spider, created the heavens.
16. The mount *meru* (or the white rock) supports the earth.
17. It also supports the numerous islands.
18. He after the model (he had taken) created the earth.
19. From one BRAHMA resembling a gilded egg, have proceeded many BRAHMAS.
20. That God who at first created the earth now pervades it.
21. The light that proceeded from the BRAHMA shone with brilliancy, splendour, and glory.
22. God rested on the sky as a honeycomb.

Verbal analysis.

1. *Pin-nóng* (written *pinang* in the plate) to be—like that; *jimmu-rának*, formerly or first beginning,—deserted or confused, chaos, *eräka*; *Teo-fü*, to bottom—heaven: *páink-din*, nonentity (is not)—earth.

2. *Páini*, is not; *lep-din*, an island—land or globe; *múng-sa-teo*, country—to wish—below or under.

3. *Lái-tyán*, many-fold: *kúp-kúp*, layer-layer: *mái-tim-múng*, trees—to be filled—country; *tejao*, end, a complete, all.

4. *Tauká*, all or whole; *krang-fá* frost—sky; *freu-páimi*, anything—non-existence; *náng-hit-tyáo*, of sitting—of doing—master.

5. *Khák-khái*, division of divisions; *then-jin-kún*, jungle—calm or quiet
নিয়ন্তান.

6. *Kang-ta*, to bring or keep (a thing) into subjection; *ái'-mut*, frost—fogs; *dái-ai-nya*, to get—hope—forest; *te-jao* complete.

7. *Khán-ta*, word—only; *jeu-kao*, thread or fibre—of a spider; *lák-pin-fá*, having transformed—become—heaven.

8. *Ná-ring*, thick—thousand; *bá-tyú-mung*, beon (a measure of length containing four cubits) yojan—four kroshas—country; *tí-pún*, place—of world; *tejáo*, whole or complete.

9. *Tan-tan*, of that—afterwards; *ju-mu*, having remained—some days; *payu-bán*, again or secondly—having remained—days (of a week), ২৭৫.

10. *Fa-ka*, god—again; *ták-bá*, having considered—said; *ru-mi-kháí*, knowing—to become—Brahma (god).

11. *Bau-ru*, I know not; *fri-deo*, god—genius; *fán-mán*, ordered—to the Brahma: *heo-pán-dai*, gave—we received.

12. *Khen-klang-rao*, to remain *गङ्गा*, in the middle *गङ्गा*, in the air, without a prop *गङ्गा*; *náng-freng*, like what—like a honeycomb.

13. *Pu-ran*, for this reason—and *tang-ka*, whole—all; *muny-rám*, country—*eraka* or desert or void confused.

14. *Fren-pái*, anybody—is not or existed not; *náng-hít-bang*, to be scated—doer—umbrella-bearing;

15. *Kang-ta*, to govern or keep in subjection—only; *jeé kán*, fibre—spider; *lak pin-fá*, having transformed—became—heaven or sky.

16. *Han-fra-fak*, one—stone or rock—white: *rang-mung* upholden—country or land.

17. *Lai-lep*, many—lands; *ti-pún* places—of world; *tejto*, all—and

18. *Khan-ta*, by word—only; *mán-pay*, he—again; *jin-pin-fá*, pattern—became—heaven.

19. *Ring-láp*, thousand—gilding; *mán-khám*, Brahma—like gold; *kai-leng*, only—yellow; *pin-mung-khai*, become—Brahma—like egg, *डिक्क*.

20. *Fa-pin*, god—became; *se-an-dia*, having pervaded—first—earth, *सुद्धि*?

21. *Klem-klem-ak*, alone with brightness—came forth; *cheng-ngúo*, rays—glorious.

22. *Khen-kláng-ráo*, remained—in the middle—in the sky; *nang-freng*, how? like honeycomb.

Major JENKINS subjoins from the institutes of MENU, two passages which seem to have been the original whence the *Ahomese* (*Assamese*) version of the creation of the world was drawn. We have added the translation of Sir WILLIAM JONES.

आसीदिदममो भूतमप्रजात मलक्षगम ।

अप्रतर्क्यम विज्ञेयमप्रदमिव सन्ततः । ५ ।

5. This universe existed only in the first divine idea yet unexpanded, as if involved in darkness, imperceptible, undefinable, undiscoverable by reason, and undiscovered by revelation, as if it were wholly immersed in sleep :

तदण्डमभवदेमं सद्यश्चागममप्रभम् ।

तस्मिन्जज्ञे स्वयं ब्रह्मा सध्वं लोक पितामहः । ६ ।

6. That seed became an egg bright as gold, blazing like the luminary with a thousand beams; and in that egg he was born himself, in the form of BRAHMA, the great forefather of all spirits.

The allusion to the earth and sky in the last two lines may probably be better interpreted from the 12th and 13th verses of MENU.

तस्मिन्मण्डे सभगवानुपविता परिवत्सरम ।

क्षयभेवात्मनो ध्यानात्तदण्डमकरोद्दिधा । १२ ।

ताभ्यां स शकलाभ्यां च दिवभूमिश्च निर्गमे ।

मध्येत्येव दिग्गहाद्यावपां स्थानं च शाश्वतम् । १३ ।

12. In that egg the great power sat inactive a whole year *of the creator*, at the close of which by his thought alone he caused the egg to divide itself :

13. And from its two divisions he framed the heaven *above* and the earth *beneath*, in the midst he placed the subtil ether, the eight regions, and the permanent receptacle of waters.

Sir WILLIAM JONES, considered it indubitable that the Hindu doctrine of the creation was in part borrowed from the opening of *Bîrûsîl* or *Genesis*, 'the sublimity of which is considerably diminished by the Indian paraphrase of it with which MĒNU, the son of BRAHMĀ, begins his address to the sages who consulted him on the formation of the universe.' The Assamese seem to have gone a step further, in expanding and adulterating the tradition with the introduction of the fresh metaphors of a spider's web and a honeycomb: the latter, we suppose, representing the fixed firmament or dome spangled with lights.

While thanking Major JENKINS, and the zealous band of *American* missionaries, of whose studies and researches he often speaks in flattering terms, we must remind him that we still lack a translation of the *Khamti* passage, published in January. Will not Mr. BROWN yet save our volume from closing without it?—ED.

IX.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 6th December, 1837.

WILLIAM CRACROFT, Esq. C. S. in the chair.

MR. JOSEPH WILLIS, DR. COLIN JAMES MACDONALD, Major A. IRVING, and Captain H. DRUMMOND, proposed at the last meeting, were ballotted for, and duly elected members of the Society.

Nawâb JAHAR KHAN, proposed at the last meeting, was upon the favorable Report of the Committee of Papers elected an honorary member.

J. H. BATTEN, Esq. proposed by the Secretary, seconded by Mr. McLEOD.

Bâbu CONOV LA'L TAGORE, proposed by ditto, seconded by Mr. HARE.

CHARLES ELLIOT BARWELL, Esq. proposed by Mr. CRACROFT, seconded by the Secretary.

Maulavi ABDUL MOJIB requested the loan of the *Harishamîn* and the *Suwadîq Mahriq* to collate with an edition he is now printing.

He also made an offer of 1000 rupees for the broken series of the *Fatawa Alemgîrî*, undertaking to reprint the first two volumes at his own expence:—referred to the Committee of Papers.

Read a letter from Dr. McCLELLAND, accepting a seat in the Committee appointed at the last meeting for the superintendence of the Museum.

Bâbu RAMDHAN SEN announced that he had completed the second volume of the *Indiya*, and in compliance with his agreement presented 50 copies of the work to the Society for distribution at their discretion.

Letters from the President of the Geographical Society of Paris, M. ROUX DE ROCHELLE, and from the Baron MACGUCKIN DE SLANE, forwarded their publications (see 'Library').

The following extract from the BARON DE SLANE's letter will interest oriental scholars :

"Sachant combien vous vous intéressez, Monsieur le Président, au progrès de la culture des langues orientales, je profite de cette occasion pour vous informer que la première livraison du texte Arabe de la géographie d'Aboulfeda sera

publiée dans peu de jours ; l'impression de cette ouvrage, (qui a été confié par la Société Asiatique de Paris à mes soins et à ceux de mon savant collègue Monsieur REINAUD de l'Institut,) s'avance rapidement, et nous espérons pouvoir bientôt en offrir un exemplaire à votre Société."

Library.

The following Books were presented by Lieut.-Colonel SYKES, through Captain HENNING of the Ship *Windsor*.

Remarks on the origin of the popular belief in the Upas, or poison tree of Java, by Lieut.-Colonel W. H. SYKES, F. R. S.

Descriptions of new species of Indian Ants.

Land Tenures of Dukhun.

Abstract of the statistics of Dukhun, 1827-28.

On the increase of wealth and expenditure in the various classes of Society in the United Kingdom as indicated by the returns made to the tax office, exports and imports, savings banks, &c. &c.

On the Geology of a portion of Dukhun, East Indies.

The following by the authors and editors respectively :

Le Diwan d'Amo'lkais précédé de la vie de ce poète par l'auteur du Kitab el Aghani accompagné d'une traduction et de Notes par le Baron MACGUCKIN DE SLANE, 1837—*by the author*.

Bulletin de la Société De Géographie, Vol. 6th—*by the Society*.

Recueil de voyages et de mémoires publié par la Soc. Geog. &c. Paris, Vol. I. containing Géographie d'Edrisi traduite de l'Arabe en Français par P. AMÉDEE JAUBERT, Vol. I.—*by the same*.

Les Oeuvres de Wali, translated with notes, by M. GARÇIN DE TASSY.

Manuel de l'auditeur du Cours d' Hindoustani ou Thèmes Gradués—*by ditto*.

Die Stupa's oder die architektonischen Denkmale an der grossen Königsstrasse zwischen Indien, Persien und Baktrien. Von C. RITTER—*by the author*.

Also various brochures, being extracts from the great works of the same author on the Physical Geography of Asia :—

"Der Ju (Yu) Stein, ju-chi des chinesen :—Der elefant indicus :—Weber Verbreitung der Pfefferrebe, banane und mango in Indien :—Der indische Feigenbaum, asvattha :—Ueber den tope von Manikyala :—Das Lowen und Tiger-land in Asien ; and die Opium cultur.

Transactions of the Geological Society of London, Vol. 4th, part 2nd, and their proceedings from No. 47 to 50 inclusive, with a list of its members—*by the Society*.

BELL's Comparative View of the external commerce of Bengal during the years 1835-36 and 1836-37—*by the author*.

Madras Journal of Literature and Science, Oct. by Dr. COLE, the Editor.

Vivāda-chintamani,—edited and presented by JOGDHAN Pandit, Sanskrit College.

Meteorological Journal for 1837—*by the Surveyor General*.

Received from the Booksellers :

Lardner's Cabinet Cyclopaedia—Statesmen, Vol. III.

Swainson's birds, Vol. II.

Wellesley's dispatches, Vol. IV.

The secretary laid on the table a catalogue of the Arabic, Persian, Turkish and Hindu works in the Society's library, prepared by the Society's maulavi and printed in Persian for general circulation.

Antiquities.

Major P. L. PEW wrote from Delhi that at his solicitation, Mahārāja HINDU RAO had handsomely presented the ancient pillar, lately lying in Colonel FRASER's grounds, to the Asiatic Society.

Major PEW stated that the fragment containing the inscription was the largest of the whole, and that its weight was very considerable so as to render it difficult to remove it from its present situation for transmission to Calcutta. It was suggested that as the shaft was already broken, and the written part considerably mutilated it would answer the Society's object to cut off the portion containing the inscription, which would thus be reduced to portable dimensions.

Resolved, that thanks be given to Mahārāja HINDU RAO for this liberal gift, as well as to Major PEW, for his kind exertions on behalf of the So-

ciety ; and that a letter be addressed to Government, on the strength of the permission lately accorded, requesting that the executive engineer of the *Delhi* division may be authorized to effect the conveyance of the pillar to Calcutta at the public expence.

With reference to the same pillar, Mr. T. METCALFE, C. S. forwarded a copy, made by hand with every care, of the inscription.

Major F&W's impression has anticipated this work ; and it is curious to remark the errors committed by the eye in copying even the more perfect passages of the inscription.

B&bu CONOY LA'L TAGORE, begged the Society's acceptance of the *Beldi Sena* copper-plate he sent for inspection at the last meeting.

Lieutenant KIRTON forwarded a facsimile of the ancient inscription on the *Khandqiri* rock, of which an imperfect copy is given in STIRLING's Report on *Cuttack*.

Lieutenant KIRTON had seized the first moment to run out by d&ak to the spot, a distance of 40 miles, in order to effect this object. He was obliged to construct a scaffolding to get at the writing, and the transcription was continued even by torch-light ; being much worn, it was found that the morning and evening shadows allowed the fairest chance of restoring the doubtful letters.

The result of this spirited undertaking has been to bring to light a very curious document, entirely different from those hitherto read, in the lat character. It is of a somewhat later date, and there are already several modifications of the alphabetical forms.

Colonel SYKES, Member of the Royal Asiatic Society, transmitted from London, copies of a few of the inscriptions on the caves of the Dakhau which he had collected long since, and had presented to the Branch Society of Bombay.

He had remarked on them, many of the Buddhist symbols noted on the early Indian coins, and he was in hopes the inscriptions if deciphered might throw some light upon them. The Secretary was happy to state that he had read the whole of them at once, and they presented another valuable link in the chain of the primitive alphabet, which would materially aid the labours of the Rev. Mr. WILSON, Mr. WATHIN, and Dr. STEPHENSON, on the west of India.

Dr. A. BURNS communicated copy of another copper-plate grant from *Kaira in Gujerat*.

This plate on being deciphered, has also led to a discovery, the value of the numerals corresponding with the alphabets of the third century, hitherto a desideratum. It is applicable to the inscription at Bhilka, and to several documents published lately without explanation of the numerical signs.

Captain EDWARD SMITH, Engineers, forwarded impressions on cloth and paper, of the whole of the inscriptions on the *Allahabad* pillar.

The mode of executing this difficult task, and the utility of it towards the correction of the highly curious historical details disclosed, were described in a note by the Secretary, (printed in the present number.) The cloth impression, suspended from the ceiling of one side of the meeting room, spread over several chairs, after touching the ground ! Capt. SMITH states that the chief difficulty of the undertaking lay in the pillar not being perfectly straight, which prevented its readily turning or rolling over.

Captain SMITH had submitted to the Military Board, several improved designs for the pedestal and capital of the pillar, adopting the Buddhist *Sinhu* for the surmounting ornament.

Captain F. JENKINS communicated a translation and analysis of the *Ahom* fragment published in the January No. of the Journal, made by JAG-GORAM KHARGARYA PHOKAN, Sadar Amin of *Gohati*.

Major OUSELEY forwarded from *Hoshangabad* the sketch of a *Jain* image in possession of a *Khandulwal banyu*, with Pr&krit inscription of 300 years old.

Lieut. MADDEN also sent from *Nimach*, copies of inscriptions on various *Jain* images dug up in that neighbourhood.

General VENTURA, Honorary Member, submitted for inspection some Bactrian coins, and Hindu antiques from the *Panj&bb*.

Among the coins, besides a number of *Apollodotus* and *Menander*, silver, were a small silver *Lysias*, a copper coin of *Helioctes*, unique; new varieties of *Mayes* and *Azes*, and a *Kosula Kadaphes*. Among the *intaglios* in cornelian and garnet, a female head with inscription *Kesava dāsasya*, another of *Ajita varma*, and others. Also a Buddhist seal of black pottery, bearing the *ye dharma* formula.

The General also sent for exhibition a series of drawings of the costumes of the Panjāb, and a portrait of *RANJIT SINGH*, by Mr. VIGNE.

Lieut. C. B. YOUNG, Engineers, presented some Egyptian antiquities, mummified alligators, &c.

H. WALTERS, Esq. gave, in the name of Captain BOGLE, a set of Arracanese griffin weights.

His Royal Highness Prince HENRY of Orange entrusted to the Secretary for exhibition, a bronze vessel formed of a cup soldered to a dish, containing, thus hermetically closed, a small quantity of water.

This vessel was found in an old temple at Java. Local tradition stated it to contain Ganges water carried thither in times of yore by some pious pilgrim.

Physical.

The reply of Lieut. HUTTON was received, accepting the Society's commission to explore the *Spiti* valley should he be able to obtain leave of absence.

H. R. H. Prince HENRY of Orange, sent three heads of the wild bull of Java (*Tandoe Banding*) for comparison with the *Gaur* of India.

Dr. EVANS pointed out remarkable specific differences in the forehead and position of the horns of the two animals.

Mr. H. M. PARKER, forwarded in the name of Mr. TREVOR PLOWDEN, of *Meerut*, a large slab of the peculiar flexible sandstone, described in a note from Dr. FALCONER, some meetings since.

A thinner slice of the same material sent by General Sir DAVID XIMENES shewed its properties in a very striking manner. On examination with the blow-pipe and with acids the cement which unites the particles of sand proves to be silicious, but in very small quantity. The stone is easily friable, and bends to a small extent only when it seems checked as with a hinge. The motion is in any direction, and is made with very slight force.

Specimens of salt from the Persian Gulf in large cubical crystals, of copper ore, and of the mineral used in dyeing the red slippers of *Bussorah* (red ochreous lithomarge?) were presented by the Hon. Colonel MURISON.

Lieut. YOUNG presented gypsum and other minerals from Egypt, collected in his journey to India. Lieut. NESBITT also added samples of the coal and iron ore (a rich carbonate) from Syria, lately mined by the Engineers in the service of the Pacha.

Lieut. H. SIDMONS, in compliance with the Society's request, forwarded a register of the tides on the *Chittagong* coast for October.

Dr. McCLELLAND placed on record a descriptive catalogue of the series of Geological specimens collected by himself while employed with the late Assam deputation, and now deposited in the museum.

Lieut. EYRE presented in the name of Dr. LANGSTAFF a collection of specimens of the volcanic rocks of Bourbon and Mauritius, with a descriptive catalogue and notes.

The tables were covered with a portion of Dr. EVANS' fine collection of objects of natural history—birds, animals, reptiles, insects, shells, and osteological, which the proprietor tendered to the Society for purchase on virtue of the late communication from Government; but the meeting was so thinly attended that it was decided to postpone the discussion of Dr. EVANS' proposition.

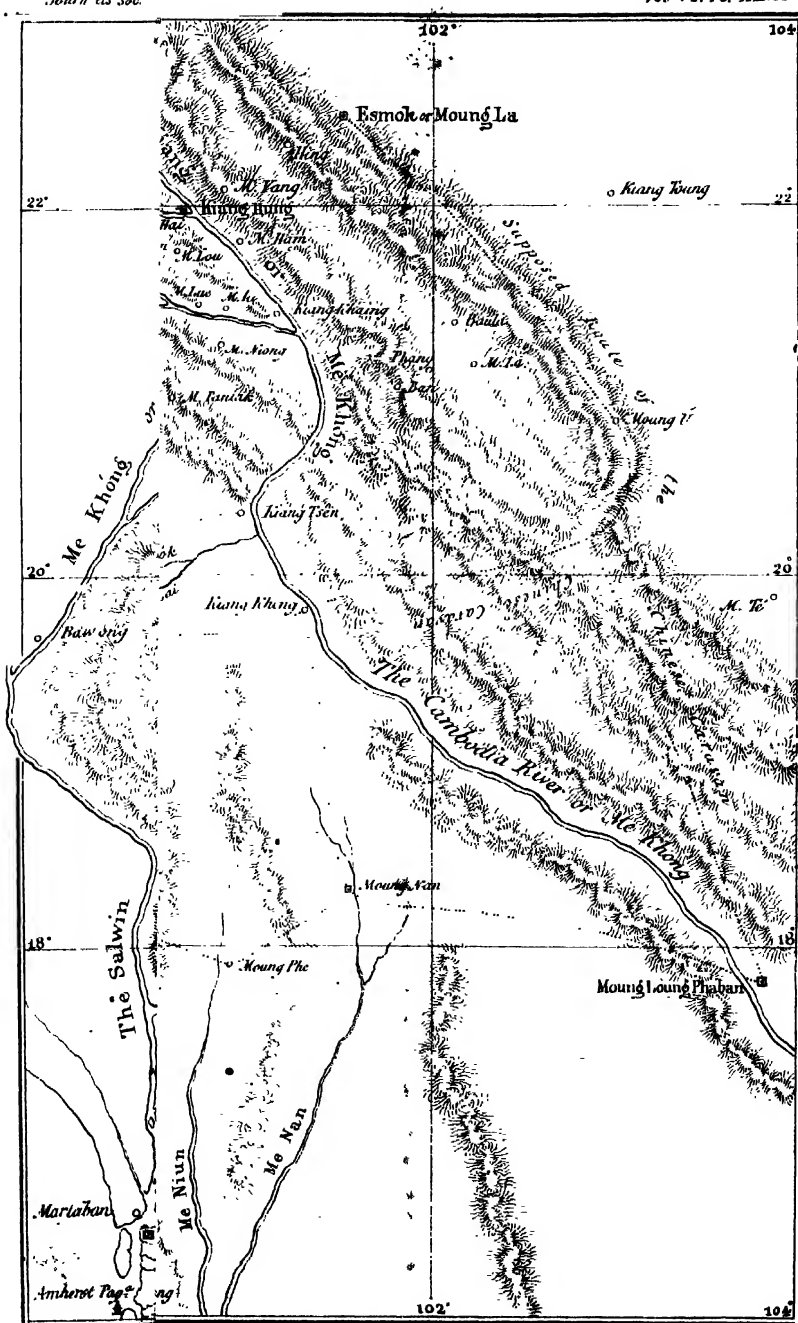
A note from Colonel MACLEOD, Chief Engineer, acquainted the Society with the progress of the experimental boring in the Fort.

The tubes had reached a depth of 450 feet, and had met with some impediment to their further descent; though the sand continued to enter below. A rolled fragment of vesicular basalt had been brought up from this depth.

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of November, 1837.

Day of the Month.	Observations at 10 A. M.					Observations at 4 P. M.					Register Ther- monster extremes.		Rain.	Wind.		Weather.	
	Old Stand. Barometer in deg.	New Stand. Barometer in deg.	Thermomet- er in air.	Depression of wet-bulb in air.	Thermo- meter in air.	Depression of wet-bulb in air.	Thermo- meter in air.	Depression of wet-bulb in air.	Thermo- meter in air.	Thermo- meter in air.	On the ground.	At elevation 45 feet.		10 A. M.	4 P. M.	Forenoon.	Afternoon.
1	29.446	29.434	78.7	6.5	5.4	69.6	81.6	13.2	10.6	79.9	65.0	65.0		WSW	N.W.	fine.	do. cumuli.
2	29.40	29.40	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
3	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
4	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
5	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
6	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
7	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
8	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
9	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
10	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
11	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
12	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
13	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
14	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
15	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
16	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
17	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
18	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
19	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
20	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
21	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
22	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
23	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
24	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
25	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
26	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
27	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
28	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
29	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
30	29.41	29.41	79.3	7.0	6.8	69.6	81.6	13.2	10.6	79.9	65.0	65.0		N.W.	N.W.	do. cumuli.	do. cumuli.
Mean.	29.430	29.407	76.5	8.5	7.4	62.1	82.1	12.7	10.6	80.9	61.5	61.5					Clear and fine.

For the last two months proper attention has not been paid to the distinctions of force in the column of wind. The mornings and evenings have been generally calm, and the breezes light during the forenoon.



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- I.—*Abstract Journal of an Expedition to Kiang Hung on the Chinese Frontier, starting from Moulmein on the 13th December, 1836. By Lieut. T. E. MACLEOD, Assistant to the Commissioner of the Tenasserim Provinces, with a route map.*

[Extracted from a Report to E. A. BLUNDELL, Esq. Commissioner, and communicated by the Right Honorable the Governor of Bengal.]

Having left *Maulamyaing* on the 13th of December, 1836, I reached the village of *Pike Tsouny* on the 16th, and was detained there by the non-arrival of the elephants until the 21st, when I finally quitted it and reached *Labong* on the 9th of January, 1837. I found the *Chou-koua* who since *CHOU CHE WIT*'s death, had conjointly with *CHOU RÁJA BRI'T* the late *Tsaubua*'s son, exercised the government over the province, absent at *Bangkok* and no *Tsaubua* nominated; and it was with reference to the appointment of one, that these officers had been to the capital.

Though I had received information of this previous to my arrival there, yet as the chiefs of *Labong* were the first to court and establish a friendly communication with us, and as our principal supplies of cattle had been drawn from their territories, I determined on delivering your letter and presents to the officiating ruler.

My reception at the place was most friendly, and I had an interview with the *CHOU RÁJA WU'N* the day after my arrival. He expressed himself glad to see me, and assured me of his anxious desire to continue on the friendly footing they had always been on with us, to afford our merchants every assistance and protection in their power, and to facilitate as much as possible a free intercourse between our countries.

I was on my arrival permitted to enter the fort and pitch my tent close to the late Tsaubua's palace, for the convenience of my followers, who found cover in some sheds attached to it, which being contrary to their customs was no small proof of their friendly feeling towards us.

Our traders stated that no difficulty or delay was experienced in procuring passes, nor any impediment thrown in the way of the cattle trade.

I quitted *Labong* on the 12th and reached *Zumuè* the same day. Here no person received me nor was any notice taken of me until I had sent to express my surprise at it, when apologies were made and many false excuses offered. I was presented to the Tsaubua on the 15th, he made many professions of goodwill towards us, which from his character I have no reason to mistrust. The chiefs present endeavoured to dissuade me from proceeding towards *China*, asserting that the roads were impassable, infested by robbers, and no supplies procurable. An indirect attempt was also made to persuade me to go to *Muang Nan*, through which district the road frequented by the Chinese caravan runs, evidently wishing to relieve themselves from all trouble and responsibility. Finding that I was not to be moved from my purpose, and that I had no intention whatever of visiting *Muang Nan* itself, they said that they did not wish me to go to *China*, but that even if they did not give me permission to proceed, if I insisted on going they could not prevent me. I disclaimed all intention of forcing my way through their country, that if your request was not acceded to I should without delay retrace my steps to *Maulumyung*. I at the same time made use of every argument I could bring forward to gain my point, and was finally told that before an answer could be given me it would be necessary to consult the authorities at *Labong* and *Lagon*, as it was customary on all matters of importance, and I should have a reply in six days. They requested me to postpone any other subject I might have for discussion until the above was settled.

I was admitted to a second conference on the 18th, arranged for the apprehension of some runaway thugs, and discussed various complaints of the cattle merchants.

Finding on the 22nd that no intelligence had been received of the officers from *Labong* and *Lagon*, who had been sent for to consult respecting my journey, it appeared to me that they were endeavouring to delay my departure until orders could be received from the *Chou-kona*. I therefore called on the *CHOU RAJA WU'N* and complained of the unnecessary delay, when he requested me to wait till the 24th for the replies.

They evidently were embarrassed how to act; the KIUNG TU'NG Tsaubua had last season sent down a mission to obtain permission for subjects to pass through the *Zumuè* territories and trade with us at *Maulamyang*; this officer was well received, and the matter referred to *Bankok* and he himself detained many months on the plea of their motives being suspected, and eventually sent back with an uncourteous refusal. After this it was doubtful how the court at *Bankok* might view the present mission.

More than two-thirds of the inhabitants of *Zumuè*, *Labong* and *Lagon* are *Talien* refugees, or persons from the *Burman* provinces to the northward, who had either voluntarily settled under the Siamese Shans, having been inveigled to do so by specious promises, which were never kept, or seized and brought away during their former constant incursions into those provinces, chiefly *Kiang Tung* and *Muang Niong*. The whole of these are much oppressed and would joyfully avail themselves of any occasion to throw off the Siamese yoke. The authorities are aware of the growing hatred and disgust to their rule, particularly amongst the *Kiang Tung* and *Muang Niong* people, and they also well know, that all these people look upon us very favourably, and as their only certain means of deliverance.

Their fears and suspicions have been lately much increased by a deserter (and a person of some rank) from one of the *Burman* towns on the western bank of the *Salwen*. He has assured them that the king of *Ava* was bent upon adding *Zumuè* to his kingdom, and that the *Kiang Tung* Tsaubua had undertaken to effect this with the assistance of his relations in captivity.

According to the arrangement made with the CHOU RÁJA WU'N I visited the Tsaubua on the 24th and told him I much regretted that I could not longer delay my departure, and wished to quit the place the next day. He said that I had long patiently waited and as the officers from *Lagon* and *Labong* had not arrived, he would take the responsibility on himself and orders should be issued for my being escorted by the road the Chinese caravans came, which was also open to our merchants. I asked whether they had any objection to throw open in like manner the road to *China*, viâ *Kiang Tung*; this he said could not be done until the *Chou-kona* returned. I thanked him for this proof of friendship towards us, but before taking my leave inquired whether any order had been issued about the tax levied on cattle sellers, for the CHOU RÁJA WU'N had on the 22nd told me that my propositions had been complied with. To my surprise they now declined to make any alteration until the *Chou-kona* returned.

I experienced the utmost difficulty in obtaining satisfactory information about the routes to *China*. Those who could have given me information were either afraid to do so, or have been schooled to repeat what the officers of Government had told me ; others were again evidently interested in the road they recommended.

The Chinese merchants residing in the place had told me that the *Kiang Tung* road was the best, that the other I should find very difficult, having ranges of high mountains to cross, and that elephants could not travel by it. I should only find scattered hill tribes and no villages for a great distance. I therefore determined if possible to obtain permission, either directly or indirectly, to my proceeding by the road recommended by them, to enable the merchants who had come up with me, and had all their goods on elephants, to accompany me. I also hoped that the road having been once travelled by a British officer with traders, might eventually facilitate its being thrown open.

On the 27th I was happy to see part of the Chinese caravan arrive, their report confirmed what I before heard about the road. The chiefs had assured me that there was a road more to the eastward than the above mentioned one, along the eastern bank of the *Mékong* or *Cambodia* river, with large towns and villages two or three days' journey apart. These the Chinese informed me did not exist, that they had many years ago been pillaged and destroyed by the Siamese Shans, and the road entirely overgrown with jangal and blocked up. They also urged me to try and get the *Kiang Tung* road, which was by far the best, thrown open.

These merchants informed me that they were most anxious to carry on a brisk trade with our provinces, and that the market was most satisfactory, but that the road travelled by those who visited us in 1836 was such as to render it impracticable for them to come by it. This objection I am happy to say can be easily overcome by their taking the road travelled by me on my return here from *Zumuè*. I remonstrated with the *Chou RÁJA Wu'n* against sending me by a road either impossible for elephants, or by one which had been for years closed in addition to passing me to another Shan district. Permission was ultimately given for me to select my own road from the information I should collect on the way. It was however agreed that I should not consider the road travelled by me as having been thrown open to us, but merely as a favor granted me being sent on a mission.

After many attempts to delay my departure I left *Zumuè* on the 29th in company with a Shan officer sent to escort me with six elephants, and though before quitting it I had taken care to have the arrangement

about the road officially communicated to him, yet the day after we left he received a letter from the court officers directing him on no account to permit me to proceed by *Kiang Tung*, but to escort me by the road travelled by the Chinese caravan. This was privately communicated to me, and I was convinced they had determined clandestinely to use every means in their power to prevent my journey, but to appear outwardly to be assisting me from fear of offending us.

We reached the frontier village of *Pák Bong* belonging to *Zumuè* on the 6th of February. Here the road to *Kiang Tung* branches off from the one they proposed my going by. Our progress had been slow, and the *Zumuè* chiefs had had ample time to send a reply to the officer with me, but none came. An attempt was made to delay me here, no rice was to be procured, and all the elephants belonging to the village were away in the jungals, and it would take at least four or five days to collect all I required for my journey to *Kiang Tung*. Anticipating detention on the road before I left town from the manner the authorities were putting off my departure, I had taken the precaution to load two elephants with rice and was thus perfectly independent of the Shans for supplies. The officer finding I had come prepared and would not stay for my elephants, volunteered to accompany me two marches to put me in the right road, though I had a man with me whom I had hired for the purpose of showing me the road. Finding this officer after the two marches inclined to come on, I encouraged him to do so, wishing him to witness every thing that occurred at *Kiang Tung*, that he might report the same to his chief, and thus convince his countrymen whatever they might think, that I had truly stated to them the object of my mission.

I reached the first village belonging to *Kiang Tung* on the 13th, and the town itself on the 26th, and was received in the most flattering manner. I was introduced to the Tsaubua on the 22nd. He and all his chiefs really rejoiced at my arrival and were lavish in their terms of the respect they had for us, and assured me they had long been most anxious to open a communication with us. He tried to dissuade me from proceeding towards *China* on the plea of the states to the north-east of his territory, and through which I should have to pass, being in a state of anarchy and confusion consequent on the death of the *Kiang Tung* Tsaubua.

The town is situated in 21° 47' 48" north latitude and about 99° 39' east longitude. It is a poor and thinly populated place, surrounded by a brick and mud wall, but so badly erected that it is constantly falling down. It is built on some low undulating hills

surrounded by high mountains, and the dry ditch round the town is at some places 70 feet deep, being dug from the base of the wall on the top of the hill, to the level of the swamp found at their bases. The surrounding mountains are well peopled by tribes of *Laws*, *Ka Kuas* and *Ka Káis*, and the villages in the valleys must be likewise large and contain a great many inhabitants judging from the crowds that assemble in the town on a market day. All the towns and villages passed by me to the north and east of the capital were inhabited, the houses much better than those in town, and in every respect more comfortable.

The Tsaubua is about 50 years of age, but an active-minded man; he has been many years blind, he is much beloved by his subjects. He was the youngest of six brothers, (the eldest of whom was Tsaubua of the place) and who about thirty years ago rebelled against the Burmans and placed themselves under the protection of *Siam* and are now detained at *Zumuè* and *Labong*. The present Tsaubua on the way, finding the Siamese were inclined to break their promises to them, after vainly endeavouring to persuade his brothers to join him, fought his way, with a small party, back to his native place, which though then depopulated he has managed to repeople. The avarice and cruelty of the Burmans drove them to the step they took. The Siamese would find the present Tsaubua a troublesome neighbour and enemy but for his misfortune.

There were formerly many distinct states in this direction ruled by Tsaubuas, who with their subjects also either joined the Siamese or were afterwards carried away. All these states now are under *Kiang Tung*, but immediately governed by a descendant of the former Tsaubuas, and no doubt, will eventually be erected again into separate states, when their inhabitants have increased, which they are rapidly doing, and will do if not disturbed by the Siamese or their tributaries.

This state is tributary to *Ava*, but the chief plainly shewed me that they had no affection for their jealous and greedy masters.

It is a great thoroughfare for the Chinese caravans, being the only safe high road from *China* to *Moué* and other Shan states to the westward of the *Salween*. It has the *Muang Lein* territory to its north, to the westward and northward of which, the wild and independent tribes of *Laws*, and *Ka Kuis* are located, rendering the road too dangerous to be travelled, so much so, though the direct road from *Muang Lein* to *Ava* is by *Thuni*, the officers and others are invariably obliged to go to the capital by *Kiang Tung* and *Mouè*.

The Chinese bring down copper pots, silks, &c. and return with cotton and tea. Many make two trips in the year, the second time they bring down rock salt from the neighbourhood of *Esnuk* (or *Muang La* of the Shans). I met a great many very respectable merchants, (some of them residing within the palace enclosure, for the Tsaubua and all trade here) all most anxious to visit *Maulamyang*. I gave them every encouragement to do so, as well as every information they required. But they, like the others, only wish to travel by the *Kiang Tung* road.

There is a great demand throughout this province for English goods. Our merchants sold their things at a handsome profit, the market being at present wholly dependent on *Ava*: many difficulties appear to exist to the trade from *Maulamyang* through the *Red Karen* country and the Burman territories along the *Salween*. There was a slight attempt made, though in a very friendly way, to delay my departure until instructions could be received from *Mouè*; however, finding I was bent on going on without delay, the point was given up and the Tsaubua made an excuse for not having me escorted in a way he could wish, for if he sent an officer of rank with me, umbrage might be taken at *Ava*. I was surprised that no decided objection was made to my going on, knowing how jealous the Burmese authorities are of any communication with their Shan provinces, and more particularly as the *Tsutke* or officer stationed in all these states to look after the Burman interest, was absent at *Mouè* where an officer of rank is placed by the government, to whom all the tributary Shan states are obliged to report the most trivial occurrence.

The merchants who accompanied me hearing of the unsettled state of the country above, and meeting with a good market where they were, decided on remaining. They were promised every encouragement and assistance, and were at perfect liberty to go when they pleased. It was agreed that no duty should be levied on any thing exported or imported by them, but of course a few trifling presents will be expected as is customary amongst the Burmans.

My elephants being unable to proceed and the road being over mountains and no forage procurable on them, I provided myself with ponies and quitted *Kiang Tung* on the 1st of March, and after passing through many large villages and some towns the residence of petty Tsaubuas, reached *Kiang Húng* (the *Kien yim gyé* of the Burmans) on the 9th. I found the *Kiang Tung* Tsaubua had not exaggerated the state of things. The late Tsaubua MAHA WANG had been dead some months, leaving a young son of 13 years of age. A nephew of his, son of an elder brother but who never had been Tsaubua, seized upon

the throne; the chiefs however were in favor of the son, and to prevent his being made away with secretly conveyed him to *China*, and feigned submission to the self-elected Tsaubua. They managed to assemble a large force near the town, and when these plans had ripened, put to death many of his principal adherents, and the Tsaubua himself had only time to escape with a few of his followers. Parties had been sent out to apprehend him but had not succeeded in discovering him when I was there. The same night they killed his aged father and younger brother, and the Burman *Tsutke*, who was in disgrace during my visit, was only saved by the interposition of the chief priest of the place. He was father-in-law to the self-elevated Tsaubua's younger brother who was killed, and had been intriguing in favor of his connections.

This place is the capital of a large province comprising no less than 12 Tsaubuaships whose territories however are not extensive, and through some of which I passed on my journey.

It is tributary to *China* but in a greater degree than the term generally implies, and might be almost said to be a Chinese province, for it pays a regular land revenue and other taxes to that kingdom, to collect and regulate which an establishment of Chinese officers and clerks are kept. But at the same time it makes certain offerings of submission and dependence once in three years to *Ava*, and which kingdom places a *Tsutke* there to look after its interest. The Tsaubua-ship has always belonged to one family, but the nomination of the individual rests with both the kings of *China* and *Ava*; that is, one appoints and the other is expected to confirm it; but should the selection made by one not be approved of by the other, they appear each to appoint a distinct person, and to allow the parties to decide the matter by arms, never interfering themselves;—this occurred not long ago.

The town stands in 21° 58 north latitude and about 100° 39' east longitude; it is built on the face of a hill on the western or right bank of the *Me Khong* or *Cambodia* river. It has no fortification and the houses though good do not amount to above 500. I saw the place under great disadvantages, many of the inhabitants had fled and the place was in the occupation of troops from various quarters.

The average breadth of the river, which is confined between two ranges of hills, is at this season about 300 feet here, and when full from bank to bank about 650, and its rise judging from its high banks must be about 50 feet. It is not at any season fordable. I had no means of measuring its depth unobserved, and I was fearful of exciting their suspicions by doing so openly. Its velocity I think is

about three miles an hour. It here has a N. W. and S. E. course, and is not navigable to any distance down, its course being interrupted by falls two or three days below the town.

I was admitted the day after my arrival to an interview with some of the petty Tsaubuas, who were almost all here with their contingents. One of them the *Talan* Tsaubua, who was the minister during the former Tsaubua's time still continued in that post, and the deceased Tsaubua's chief wife, МАНА ДЭ'ВИ (but not the mother of the young Tsaubua who is by the second wife) acted as regent for the young lad, nominally by the advice of the petty Tsaubuas; but the minister was all-powerful, and did as he pleased. He had been the main instrument in the scenes lately acted there, and being a shrewd intelligent man, many supposed he had some design on the throne himself. Though my reception was civil, yet they shewed a degree of suspicion of the objects of my mission, refused to permit me to proceed over to the frontiers of their own territories towards *China* without a reference, and even hinted I had better return. They at first declined receiving the presents, but after explanations accepted them for the young Tsaubua.

It was already evident that I should not be permitted to pursue my journey, but I considered it desirable to remain at the place a few days to endeavour to allay any suspicions the authorities might entertain respecting the object of my mission, and to become better acquainted with them. I therefore requested the authorities at *Esmok* or *Muang La* might be informed that I was the bearer of letters and presents to them which I wished to deliver. Though they did not for some days make the communication yet I had reason to know the letter sent faithfully detailed the object of my mission and all I had said. I dined the next day at the palace and met all the Tsaubuas and chiefs, who like the day before were clad in Chinese costumes. All the attendants were in the same dress, and the dinner &c. completely Chinese. A few cups of spirits, which some of them freely drank, soon made them throw off the formality of Chinese etiquette, and strive to make themselves agreeable, particularly the minister, who alone can speak Burmese, though all speak Chinese.

The reply from China arrived on the 23rd and the same evening the *Talan* Tsaubua* and some others came to communicate its contents to me. It contained the same remarks about merchants, &c. as made by the officers on my first interview, and went on to say that British ships daily visited *Canton*, and that that was the proper route for an officer deputed on a mission to go; that they had consulted all their historical records and could not discover a precedent of any officer

coming by the road I had, that *Kiang Húng* was a town of theirs, that orders had been sent to treat me with attention and settle all matters connected with my mission, that our merchants were at liberty to trade with them, and that their own traders over whom they exercised no control could likewise visit *Maulamyaing* if they liked ; but if I insisted in coming on, it would be necessary to refer the matter to *Pekin*.

It would have taken a year at least to receive an answer, and as it was not difficult to surmise what the reply would be from that haughty court, I considered it prudent to let the matter rest, hoping that at some future period more success might attend a similar attempt.

The officers had invariably prepared me for the refusal, assuring me that even they themselves had never been permitted to go beyond *Puer*, and that only on most particular business, that the Chinese were alarmed at the approach of an officer from any foreign state, but our merchants would be allowed to enter certain towns for the purpose of trade. On this point however I received many contradictory accounts, and I am led to think that *Esmok*, which is a Chinese town built close to *Muang La*, (a Shan town on the frontier and only separated by a nullah) and five days' journey from *Kiang Húng* or *Puer*, called by the Shans *Muang Meng*, three days' journey further would be the extent of their journey. I had during my long stay visited *Мана Деви*—she regretted much I had not gone up during her husband's lifetime, that he would have at once sent me on, and apologized for not having shown me more attention. Of this I certainly had no cause to complain ; I was in the habit of exchanging frequent visits with the minister and other *Tsaubuas*, and I am satisfied left them impressed with a high opinion of our liberality, justice and power. They said they could only compare us with the Chinese, whom they praised highly ; that they were punctual and just in all their transactions, that they insisted upon the regular payment of their taxes, and wrote long letters about a few pice ; but on the other hand they never took or kept any sum however small, that they were not entitled to. They on the other hand never failed loudly to complain of the avarice, &c. of the Burmans, whom they neither respect or regard. I endeavoured to penetrate to *Ava* by *Muang Lein* and *Thainni*, or return to *Zumue* by the road on the eastern bank of the *Cambodia* river, for the purpose of meeting the *Chou-kona* of that place, but I regret to say that I was most reluctantly obliged to retrace my steps by the road I went up, in consequence of a despatch having reached *Kiang Húng* from *Kiang Tung* entreating the *Talan Tsaubua* to send me back there, as

orders had been received from *Mon* not to permit me to proceed towards *China* until the commands of the King of *Ava* were received. In consequence of which, orders had been received from the young Tsaubua to escort me back by the road I had come when I wished to return. The minister confessed that he was under obligations to the *Kiang Tung* Tsaubua, and if he now allowed me to go by any other route, it would certainly get the Tsaubua into trouble; he hoped therefore I would not press the point, as it was painful to him to disoblige me, and he would be obliged to apply for instructions from the young Tsaubua, if I insisted on it. I thought it advisable to wave the question with a good grace, for there can be no doubt that the reply would have been in favor of the *Kiang Tung* Tsaubua's request; because that chief has considerable influence with his state, the young Tsaubua being betrothed to his daughter.

The day before I left I met all the chiefs at dinner at the palace, when they all, and particularly the minister, gave me assurances of their friendship for us, and of their anxious desire to promote a free intercourse between our countries, that no duty whatever should be levied on our traders, and urged me strongly to repeat my visit, and to send up some merchants, and they would, to ensure them a safe passage to *China*, send people with them. I was likewise told by him that their suspicions had been raised respecting the objects of my visit, by certain reports propagated by the Burman *Tsutke* and his party, who though in disgrace had sufficient influence over their ignorance to excite their fears, but that my frequent intercourse with them soon removed their mistrust, and he hoped the unreserved and friendly manner they had lately communicated with me had removed any unfavorable impressions I might at first have formed of them. I met there many Chinese merchants settled at the place as well as those belonging to caravans. They were all eager to trade with us, and promised to visit *Maulamyaing*. They also urged me to send some of our merchants up to them. This however would not answer; for they would be obliged to transport their goods chiefly on elephant-, against which there are many objections. They require from us gold thread, carpets, bird's nest, sea slugs, dates, ivory, &c. &c. Some samples of Pernambuco cotton I showed them pleased them much. Cotton would also be an article of export, for this is what they chiefly carry away from *Muang Nan*, and the difference of price, which is much in favour of the province, will more than remunerate them for the distance they would have to come for it. Their imports into *Kiang Hung* are the same as to *Kiang Tung*. I there met with woollen cloth brought by

them much cheaper than it can be purchased here. Their exports consist principally of tea, which with a little cotton is a staple of this territory. It grows on both sides of the *Me Khong* in large quantities, but like the samples I have brought down, with some seed, of a coarse description, but whether from their mode of preparing it, or naturally so, I cannot tell.

Their state extends on both banks of the *Me Khong* : it is bounded on the N. and N. E. by the *Yunan* province ; to the E. by *Cochin China* ; to the S. E. by the *Lauchang* territory, and to the south on the eastern bank of the *Mekhong* by both *Muang Luang Phaban* and *Muang Nan* ; to the southward on the western bank of the river by *Kiung Khiaing* (a small state ruled by a Tsaubua tributary to *Ava*) and *Kiang Tung* ; to the westward by *Kiang Tung* ; to the north-west by *Muang lun*, which last stands in the same relation to *China* and *Ava* as it does.

I quitted *Kiang Háng*, on the 26th of March and reached *Kiang Tung* on the 31st. Here I saw the order from *Monè* not to permit me to proceed until further orders, but if I insisted in going on, they were not to prevent me but merely to take a list of the followers, &c. with me. During my stay I frequently saw the Tsaubua who as before urged me to use every endeavour in my power to obtain a free passage through *Zumuè* for all merchants, which could easily be done by British influence. He assured me it was far from his thoughts to attempt to rescue his relations from captivity, though strong enough to do so, but he knew the attempt would lead to bloodshed and be the means of their being removed to *Bankok*. He complained of the Siamese after so many years of quiet, which he entirely attributed to us, again making aggressions into the territories of the Burmese, alluding to the affair at *Mak mai* ; that he had hoped we should not have permitted any thing of the sort, that he had lately re-established many of his deserted towns towards *Zumuè*, but he much feared they would not be allowed to remain, unless we interfered. That they considered themselves prevented by the treaty of *Yandabu* making aggressions into the Siamese territories, and we ought to put a stop to their being molested and robbed by the Siamese. He urged me to repeat my visit and to beg of you to send some person up to cure him of his blindness if possible.

I quitted *Kiang Tung* on the 4th of April, and reached *Zumuè* on the 18th, having left the elephants to come on by short marches, the country was completely burnt up and no forage to be found.

The Shan officer who had accompanied me had returned from *Kiang Tung*, the Tsaubua told him he was glad to hear I had arrived

there safe, and inquired particularly about my proceedings at *Kiang Tung*, and was satisfied by the reports made. The *Chou Raja Wún* was not pleased, and when I saw him said he was very much afraid the *Chou Houa* might be displeased at my going to *Kiang Tung*, and all the blame would fall on him. Some merchants who had come up from *Maulamyang* for the purpose of joining me had been there some time. I endeavoured to obtain permission for them to proceed by *Kiang Tung*, but the *Chou Raja Wún* would not hear of it, but said they were at liberty to go by the eastern road, which had been conceded to us, that every assistance would be afforded them, and passes given. He begged me to remain until the *Chou Houa's* arrival.

On the 22nd I held a long conference with the *Tsaubua* on various points. It ended in positive prohibition to the merchants passing through *Zimmay* to *Kiang Tung*. The Shan officer who accompanied me was even put in irons, and was only released through my intercession with the *Chou Houa*, who entered the town on the 6th May.

The king of *Siam* had forbidden all communication between the two states on any account, that they never could eradicate the hatred they had for the Burmans, and the *Kiang Tung* people though not Burmans were subjects of *Ava*, and therefore could not for a moment be trusted. But there was no objection whatever to our merchants going by the road on the eastern bank of the *Me Khong* or *Cambodia* river, but they would not permit any of the Shans from *Kiang Tung* or any place in any way subject to *Ava* entering their territories.

I could not leave the place until the evening of the 11th in consequence of a little discussion about a woman; a native of India had taken from this place and was attempting to extort money from her, and threatening to sell her, and to obtain satisfaction for a case of theft that had occurred many days before, and though some of the parties were secured, they were screened by the *Chou Houa's* officers, and the investigation put off in a most disgraceful way. The first the *Chou Houa* settled by allowing me to bring the woman away with me, and as I could wait no longer, he promised to have the matter inquired into before some of my people whom I left behind; and the officers, who had not been more attentive, punished.

In spite of the disagreeable discussion I had had with the chief of *Zumuè* we parted all good friends, with mutual assurances of wishing to continue on good terms with each other.

Having left the elephants behind I returned here by a different road to the one travelled in going, and which though rather longer is much better in every respect than the other.

Zumuè, *Labong* and *Lagon* have already been described by Dr. RICHARDSON, the former is in 18° 47' north latitude and about 99° 20' east longitude. They form the patrimony of one family, the chiefs are therefore all connected, and the oldest usually exercises a sort of control over the others, but this appeared to me to be very small and having only reference to their external intercourse or war with the Burmans. Much jealousy exists between them all.

The *Chou Houa*s of both *Labong* and *Lagon* have been lately elevated to the Tsaubuaship of those places, and the *Chou Rája Brá*i of the former and *Chou Rája Wín* of the latter to the offices of *Chou Houa*. Both these states have always proved themselves anxious and willing for a free intercourse, forming a contrast in this respect with the conduct of *Zimmay*.

Cattle is abundant in *Zumuè* and *Lagon* but we have nearly exhausted the *Labong* territory. The inhabitants of the former place, to escape the oppressive exactions they are subjected to when they sell cattle, deliver them to our traders in the *Labong* territory, and thus avoid having their names registered.

There is little or no trade in these districts; the inhabitants procure salt from *Bankok*, and export paddy and stick lac. Their home manufactures supply most of their wants, and the only thing in demand from our province is the red cotton stuff called by the Burmans *shaní*, and for this even the merchants do not obtain prime cost, and are only repaid by the profit they make on the cattle exported in return. In spite of their enmity towards the Burmans, large quantities of betel-nut are carried into *Kiang Túng*, which state has not a single tree of that fruit in it. Many of the chiefs, if not the whole, are aware of it and allow their followers to smuggle it out of the country for their own profit, but especially object to the poorer people doing so. The trade with *China* is very limited, about 300 mules come down annually (but not one-third laden) with silks, (raw and made up) copper pots, tinsel, lace, &c. which they exchange for cotton, ivory, horns, &c. A traffic is carried on also with the Red Kareans on the right bank of the *Salween*, exchanging cattle for stick lac and slaves. This last horrible trade has not diminished, and I regret to say some of the inhabitants of India have embarked in it. I warned them agreeable to your commands of the penalty attending the introduction of any of those unfortunate creatures into our provinces.

One of the Red Karean chiefs accompanied the *Chou Houa* to *Bankok*: his as well as that chief's visit had reference to an attempt made some months ago by the Siamese Shans, to bring away the inhabitants

of some Burman villages on the western bank of the *Salween*, who they had been informed were willing to place themselves under them, if a force was only moved towards the frontier to protect them. The Burmans however met them with a large force and obliged them to return. The Red Kareans had sided with the Siamese and were eager that an attack should be made, with the sole view of getting a few slaves for sale. This useless adventure was strongly opposed by many of the chiefs, but the *Chou Houa* and *Chou Rája Wún* of *Zumuè* had their own way. They were, I heard, preparing to attack some small towns on the eastern bank of the *Salween* belonging to *Monè*, when I left.

The *Tsaubua* is old, upwards of 80, he is a mild and well disposed person, but now entirely given up in making offerings to the pagodas and priests, so that the *Chou Houa*, who is a clever and able man though naturally of a bad disposition, and much feared and disliked by the people, is in fact the ruler, and has his own way on all matters.

The states of *Muang Nan* (which is as large as *Zumuè*) and *Muang Phe*, (smaller even than *Labong*) stand in the same relation to each other as the other states before mentioned do. Cattle is abundant in these. They produce more cotton than the others and a greater number of Chinese visit them, and many even from *Zumuè* go there to procure a return load.

These territories occupy the space between the *Salween* and *Cambodia* rivers, but on the eastern bank of the latter lies the town and territory of *Muang Luang Phaban*, said to be much larger in extent than any of the others, and to be the capital of *Laos*. This place is also visited annually by the Chinese caravans, but only one or two of our traders have yet reached it, and they report the authorities are anxious, as those of *Muang Nan*, to open a communication with us.

The tribute paid by these states to *Siam* is small : the five first pay theirs in teak-wood chiefly, floated down the rivers which pass through each province, and fall into the *Me nan*. *Muang Luang Phaban* pays its tribute in ivory, eagle-wood, &c. there being no water communication between it and *Bangkok*. This last state is also said to be tributary to *Cochin China* and *China* ; to the former it sends presents triennially, and to the latter once in eight years it sends two elephants.

With reference to the road that is travelled generally between this and *Zumuè* and by which I went, it runs for six days over a flat country, then the country becomes gradually mountainous and continues so for 12 marches, to *Muang Hunt*, the frontier Siamese village situated at the foot of the range. The whole distance is much intersected

by numerous large and rapid torrents. Access with a regular army and its equipments is impossible by this road and the Shans are well aware of it. There are numerous passes however of which we are totally ignorant, and of which they wish to keep us in the dark. From *Muang Hunt* to *Zumuè*, four marches, is through the valley of the *Me Piu*. From *Zumuè* to *Esmok* or *Muang La*, there may be said to be only two roads, the others being only branches of them and occasionally slightly deviating from them. The one I proceeded by is for three days over low hills, then for eleven marches to the frontier village belonging to *Kiang Tung*, *Hui Tai*, through valleys and occasionally over a few low hills, then over high mountains to *Kiang Tung*. From *Kiang Tung* to *Kiang Húng* the country is both hilly and mountainous with small rich valleys through which we daily passed, and in which there are numerous villages all well peopled. These mountains though not passable for carts have good roads and are in every respect easier to pass over than those between this and *Zumuè*, but there is not a spot of ground amongst them in which an encampment could be formed for a large force. Water is throughout abundant and the country thickly wooded.

From *Kiang Húng* to *Muang La* is five marches, and the road runs over high and barren hills.

The other road is the one by which the Chinese caravans come to *Zumuè*; it separates from the other one the village of *Pak Hong*, from whence to the *Cambodia* river, on which the town of *Kiang Khong* stands and belongs to *Muang Nan*, it is six or seven marches. The river is there crossed, the road continues in the *Muang Nan* district for four or five days, and then enters the *Muang Luang Phaban* territory and continues in it for two or three days, after which it passes through the *Kiang Húng* territories to *Muang La*. The Chinese describe this road as very mountainous. It occupies them forty days to reach *Muang La* from *Zumuè*. The road travelled by the Chinese, to *Muang Nan*, separates from the *Zumuè* one at *Kiang Khong*, on the western bank of the *Me Khong* or *Cambodia* river.

The road I returned by from *Zumuè* is the high road from that place to *Bankok*, viâ *Lahaing*; to within two marches of that place I proceeded, and there struck off to the westward to this place. After crossing the *Me Piu* only, did we meet any high hills and then only one, which did not occupy us long in getting over. The rest of the road is chiefly hilly but of no elevation, and though no cart road exists, one might with very little trouble be made passable for an army with its equipage. From this road, those to *Muang Nan* and *Lagon* branch

off, and it is by the former I should recommend our communication with *China* being kept up.

The accompanying map has been hastily prepared to forward with this letter to enable you to trace my route and the situation of places mentioned by me. I have adopted the Shan names of places, as pronounced by them, with the exception of those which from frequent usage have become well known.

[We must solicit indulgence if the proper names in this paper are incorrectly given: it was impossible to distinguish the *n* from the *u* in the MS.—ED.]

II.—*Abstract Journal of an expedition from Moulmien to Ava through the Kareen country, between December 1836 and June 1837. By D. RICHARDSON, Esq. Surgeon to the Commissioner of the Tenasserim Provinces.*

[Communicated by the Right Honorable the Governor of Bengal.]

On the 13th of December 1836, in company with Lieut. McL^{an}don, I left *Maulmain* and proceeding up the *Gyne* river reached *Pike-tsaung* the last village in our territories, on the 16th, here we waited four days for the elephants. On the 21st we continued our march, on the 25th crossed the boundary river separating the British possessions from those of *Siam*, and on the 26th we parted company, Lieutenant McL^{an}don continuing his route along the now well-frequented road to *Zimmay*, and myself striking off more to the westward, by a path rarely travelled except by the scanty *Kareen* population of the surrounding hills, repeatedly crossing the *Moy Gnow* so rapid and deep at this season that almost every time we crossed some of the people were carried down the stream. On the 1st of January I reached *Mein loon gyee* (the old *Yeun saline*), having passed only one village. Here I halted to endeavour to obtain rice to carry us through the nearly uninhabited country between this and the *Thalween*. On the following day we were joined by eleven Shans, inhabitants of the town of *Whopung* and its vicinity, who had been on a trading journey to *Maulmain*; they increased our party to ninety, all of whom were traders except about twenty-five followers of mine, and carried goods to the amount of between eight and ten thousand rupees. Their means of transport were four elephants, a few bullocks, and the remainder on men's shoulders. They were in great measure dependent on me for their supply of provisions and where the distance between the villages was great I had to assist them in their carriage also. I had some discussion with the *Mys-woon* about allowing the *Monay* traders,

Burman subjects, to pass through the point of territory under his jurisdiction; he at length agreed to it, but proposed to levy a duty of 10 per cent. against which I remonstrated as exorbitant, considering the nature of the road. A reference on that point to Zimmay will however be necessary. On the 6th January left *Mein loon gyee* with only five days' provisions, about one-fourth of what I wished to procure. We travelled along the road used in the monsoon (the *Mein loon gyee* river being too deep to ford), and reached the *Thalween* in lat. 18° 16' 14" N. on the 16th without seeing a single village. In the afternoon, the *Thoo-gyee* of *Ban-ong* the *Ka-reen-nee* village on the western bank, crossed over to my tent and told me that he had the orders of *Pha Pho* (the chief of the *Kareens*) to detain me here as it was his intention to come this far to meet me. After some remonstrance I was obliged to comply. Our rice had been short for some days and we had now the greatest difficulty in procuring one meal a day of a mixture of cholum and rice, and even that, though the people were out all the morning, was often not brought in till the evening. On the 26th even this failed us and we were obliged to push on with the consent of the *Thoo-gyee* who declared himself unable to assist us. Travelling by the same road as on my last mission, we reached *Pha Pho's* village on the 28th, having passed three or four small villages. We found that *Pha Pho* had been gone a day or two on his way to meet us on the *Thalween*, but as he had gone by a road lying to the northward of the one we had come by, we missed him, and, what was of more material consequence at the time, our provisions which he had taken with him. The people at the village were however very attentive, and his youngest son went with two of our elephants on the following morning to a *Young-thoo* village half a day off, for rice.

On the evening of the first of February *Pha Pho* returned, and on the 3rd I waited on him with your letter and presents. He received me kindly and after several friendly visits and some discussion, I succeeded in obtaining an answer to the letter, promising every facility and protection to our traders, bringing a pass from *Maulmain*, passing through his country to the *Cambodia* Shan states; he also agreed to the Shan traders passing through to *Maulmain*; he promised to levy no duties, but said that the traders must make a small present on asking leave to proceed. He assured me my visiting the other chiefs was quite unnecessary, as he was the paramount authority, and any arrangements made with him must bind the others; as I did not know what towns I might have to visit in advance, and my presents not being very numerous, though quite valuable enough for the people I had to deal with, I did not visit them.

On the 6th February I took my leave, having hired a guide to whom the chief gave his orders touching his good conduct, and directing that we should be supplied with rice. From hence the route is perfectly unknown, no European having ever travelled it. The first two days and a half our march lay through a hilly or rather mountainous jungly country nearly destitute of inhabitants, the road bad and difficult for bullocks, water sufficient though we had no streams of any note to cross. The next two days the hills continue but covered with a considerable depth of soil with few large trees and little underwood, the population pretty numerous, and nearly the whole of the hills brought under cultivation, which is performed with considerable care and neatness. During the next three days which brought us to *Ka-doo-gyee*, the first Burman village, we were obliged to make a detour to the eastward, the proper road being said to be blocked up by fallen trees, and consequently impassible for the elephants which are never used here. This threw us out of the line of the inhabited part of the country, and we saw only one small village of deserters from *Mok-mai* and no cultivation. The red *Kareen* country is considerably more extensive than I had been led to believe from the information obtained on my last mission, and the population more dense, if density may be applied to any hill people. The part of the country crossed by me was said by no means to be the most populous part of it, which indeed might have been inferred, as it lay along the borders of the desert waste they have made, separating them from the Burmans, against whom they entertain the most rancorous enmity. It will be long before there is any considerable demand for European manufactures; they are in the first and rudest stage of an agricultural population; their habitations are miserable and destitute of every thing that conduces to the comfort of human beings, to which they are scarcely allowed by the Burmans to belong: nearly all their present limited wants are supplied within themselves. Their only traffic is in stick-lac which is produced in great quantities, and slaves, whom they capture from the Shan villages subject to the Burmans lying along their frontier. From three to four hundred are annually bartered with the Siamese Shans for black cattle, buffaloes, salt and betel-nut. This horrible traffic has within the last few years been somewhat diminished by the asylum afforded to the fugitive slaves of the Shans, in our possessions here.

The only articles of exchange they are at present known to possess available as returns to this market, are tin and stick-lac, both in abundance, but the former is too heavy and the latter too bulky to be avail-

able to any great extent with our present means of transport. Tin is to be bought there for 50 rupees per 100 viss, and will fetch in the market here about 80 rupees, there is at present however but little demand for it. Stick-lac may be bought at 200 rupees the 100 baskets, weighing on an average 22 viss or 70 odd pounds, and sells here from 880 to 1100 rupees.

On the 13th of February we reached *Kudoo* a stockaded village of about 80 or 100 houses, half of which may be within the stockade. It is called a military station though there are no regular troops here, indeed the Kareens till within the last two years were constantly in the habit of carrying off the people from the very gates of the stockade, which now pay them a sort of black mail, as their own government cannot protect them; here we halted one day to rest the elephants. The people exposed some of their goods for sale but had few or no purchasers.

On the 15th we left *Kudoo* and passed the small village of *Salaung* of 15 or 20 houses of catechu boilers quite as poor as the Kareens, and *Ban-hat* of 120 houses of rather more respectable appearance.

On the 18th February we reached *Mok-mai*. Both the above villages are under Kayennee influence, and the last from which the head men came out to meet me forms the limit of the journeys of the Chinese caravans in this direction. *Mok-mai* is a stockaded town of perhaps 300 or 350 houses, the residence of one of the Tso-boas of *Camboza* (a general term for the Shan states in this quarter). I halted about a mile from the town, and sent the guide furnished me at the last village, to notify my arrival, and request to know where I should pitch my tents. He returned and told me I might either come into the town or encamp near a Poon-gyee house outside. As there was a feast in the town, I preferred the latter as more out of the way of the noisy curiosity of the people. I could not however have fared much worse any where, for all the inhabitants of the place poured out to look at me. When I reached the halting-place, such a crowd had collected that it was scarcely possible to unload the elephants; and before this was done they had become so riotous and insulting that I was obliged to send in to the Tso-bao for protection. He sent one of his *Atween-woons*, and some peons who after some trouble and a good deal of rataning which the *Atween-woon* applied himself, we were enabled to pitch the tent.

A *Than-dau-tseen* came out in the evening to ask me for a list of the presents, to inquire the object of my visit, and to request me to remain here a day to give them time to report to the head Burman

authority of *Monay*. I satisfied them in the two first points, and agreeing to halt proposed calling on the Tso-boa in the morning. I was prevented doing so by the crowds of noisy people round my tent; I had however a good deal of conversation with some municipal officers who visited me; they were all Burmans, understood the nature of my mission, and expressed a readiness, as far as they could, to forward the objects of it. I learned from them that the authority of the Tso-boa is a dead letter, the whole real power being in the hands of officers appointed by the court of *Ava*. The *Bo-hmoo-meng-tha Meng-myat-boo* (general prince MENG-MYAT-BOO) a half brother of the king's, son of a Shan princess, was at that time, and had been ever since the war, governor of the whole of the Shan countries comprehended under the general name of *Camboza tyne*; he generally resided in *Ava*, but his deputy the Tseet-kay-dau-gyee had his head quarters at *Monay* with some officers and a small military force. All business is transacted by them at the *Tut youm* or military court-house. Much surprize was expressed that I had brought letters to the Tso-boa and not to the military chiefs. I begged them to believe our sincere wish to establish friendly relations with the government in whomever vested, and assured them that had you been aware of the existence of a higher authority than that of the Tso-boa's, resident in the country, your letter would have been addressed of course to that authority. I desired them to inform the Tso-boa of the reason of my having failed to visit him to-day, and to request he would give orders or send some one to prevent the people crowding round the tent in the unreasonable way they had done, and to say I should put off my departure and wait on him on the following day. An Away-yuik came out in the morning to say the Tso-boa would be glad to see me, and I accompanied him into the town. The Tso-boa is a young man of about six and twenty, son of the last Tso-boa who was killed in the dreadful slaughter of the Shans at the stockades above *Prome*, during the late war.

I explained to him the nature of my mission, regretted that you were not aware on my leaving *Maulmain*, that my route lay through his city, expressed my certainty that you would be equally sorry that you had not had an opportunity of writing to him. I repeated my assurance of our anxiety to be on friendly terms with the Shan chiefs, and promised every protection and facility of trading to his people if they visited *Maulmain*. I requested him to encourage their doing so and begged in return that he would afford the same protection and facilities to our people visiting his country, to which he merely assented

saying "tis well." I had then some conversation with the two *Tseet-kays* (Burman officers sent from *Ava*) regarding the British possessions, power and resources, of every thing regarding which they are in utter ignorance. The *Tso-bao* himself scarcely opened his lips;—my visit lasted about an hour. The traders exposed their things for sale during the two days we halted here; there was a strong desire to buy on the part of the people, and they sold as much as from the size of the place they had reason to expect. Silver is very scarce and that in circulation is half copper. On the 20th we started for *Monay* and reached *Ban-lome* a small village of 12 or 14 houses in the evening. This is the first village we have seen since leaving their country, the inhabitants of which consider themselves as tolerably safe from the *for-rays* of the Kareens, which they all compare to the swoop of a hawk. At *Mok-mai*, though the town may contain 2000 or 2500 people, they dare not go half a mile from the stockade for firewood, and were astonished at the temerity of our mohauts in going singly into the jungle after the elephants. On the following day we reached *Monay*.

The first days' march from *Kudoo* is rugged, mountainous and difficult with no water (except one small stream) till the end of the march, when we cross the *May-neum* about three feet and a half deep. The two following days to *Ban-hat* is a good deal along the bed of a small stream; the road rugged but no hills to cross; water abundant. The next day to *Mok-mai*, which lies quite out of the direct line of march by this route to *Monay*, is over the same range of hills crossed the day of leaving *Kudoo*, but lower. Leaving the *May-ting* deep nearly four feet at *Ban-hat*, and encamping again on the *May-neum*. At *Mok-mai* there is a good deal of cattle, and cultivation round *Ban-hat* and *Mok-mai*, the rest of the country rocky mountains covered with jungle. The last two days the road was better, in many places practicable for carts, water plentiful and a great deal of cultivation near *Monay*.

The *Tso-bao* of *Mok-mai* furnished me with a guide who had authority to order the *Thoo-gyee* of *Ban-lome* to relieve him and furnish one who should accompany us to the confines of the *Mok-mai* territory where people would probably be sent from *Monay* to meet us. The *Ban-lome* *Thoo-gyee* was not to be found in the morning, and we proceeded without him. On reaching *Monay* we were obliged to inquire our way to the place that had been recommended as encamping ground by our guide from *Mok-mai*; no one was inclined to give any information, and it was not till after many inquiries we met one man civil enough to point it out to us. We had scarcely halted when we were surrounded by some hundreds of people, and the same scene of

shouting, indignity and insult was repeated as at *Mok-mai*. I got the small tent pitched and endeavoured by shutting the windows to escape, but in vain; they held them up and shouted more furiously. I sent the Shan interpreter with some of the most respectable traders to the Tso-bo-a to report my arrival, the purport of my visit, to complain of my reception, and to request protection from the insults of the mob. They were stopped by the Tseet-kay whose house they had to pass; he questioned them in most overhearing manner as to who they were, where they came from, and what brought them here; they endeavoured to satisfy him on all these points and explain the reason the letters were not addressed to him; they asked permission to see the Tso-bo-a, and requested protection from the mob. He immediately sent out one or two TOUNG-HMOOS and some peons, with ratans which they seemed practised in using, to keep the rabble off the tent. He told my people I should not see the Tso-bo-a till he was perfectly satisfied with the objects of my visit, said we had no right to come this road, that "BURNES" was in *Ava*, and if we wished to come we should have gone to *Ava* for permission. After a good deal more in the same strain he concluded by saying—"Well he shall see the Tso-bo-a to-morrow." In the evening MENG-NAY-MYO-YADZA-NARATA the chief secretary came out to my tent to inquire further the object of my visit, and was much more friendly than I expected from the Tseet-kay-dau's reception of my people. I gave him all the information he wished; he had been a sort of adjutant-general to MAHA-NAY-MYO the general of the Shan troops employed about *Prome* during the late war. After a long conversation we parted very great friends, and he continued to be most friendly and attentive during the whole of my stay. On the following morning he sent for the Shan interpreter and several messages passed regarding my reception by the chiefs. It was proposed I should first go to the *youn* where the lesser officers would be assembled; that I should there take off my shoes and wait till a report was made to the Tseet kay, when he would send and call me to his house. I objected to the whole arrangement and told them that in *Ava* I never took off my shoes but in the palace, the houses of the princes or at the *Hloot-dau* where I sat on an equality with the Woon-gyees and Atween-woods.* I acquainted him that as my letter was to the Tso-bo-a I should wish to deliver it in person to him; but the Tseet-kay being the higher authority I wished first to see and be guided by him, as you had commissioned me to open a friendly intercourse with this country whoever was at the head of the government. MENG-NAY-MYO returned a message to say he would propose, if I wished it, that I

should see the whole of the military officers and the Tso-hoa at once at the *youn*. The fact of my having been in *Ava* at once prevented their saying any thing more about the shoes ; to this proposition I immediately acceded as it got over the difficulty of having the letter to the inferior authority, but on sending the Shan interpreter in the evening with my acquiescence, MENG-NAY-MYO was from home. Next day nothing was done. The Tseet-kay said he would consult with the other chiefs and let me know. The following day I sent to learn their determination and was told I should see the Tso-hoa and all the military chiefs that day at the *youn*. I consequently took the letter and presents with me. I was not requested to remove my shoes but was obliged to sit with my own coolies, servants, and the people of the town, outside the *Coon-tseen* (a plank about a foot and a half high which separates the centre from the outer part of the house) within which the Tseet-kay-dau-gyee, second Tseet-kay, two Nakans and two Bodhayees were seated. My friend MENG-NAY-MYO seated himself by me and the Tseet-kay-dau-gyee was seated close to me, separated only by the "*Coon-tseen*." I now begged personally to explain the reason of your having written to the Tso-hoa direct, and hoped the mistake would not be allowed to have any weight against our good intentions and wish to strengthen the friendship which had so long existed between the two countries, which was the sole intent of my mission, by opening the nearest route between the British possessions on the coast and this place, &c. &c. I concluded by expressing my wish to deliver the letter in the presence of the assembled officers to its address. The Tseet-kay then took it from me, told me the Tso-hoa was not present (I had mistaken the second Tseet-kay for him), and commenced his conversation in a most overbearing strain which he kept up during the whole time it lasted ; told me I had no right to come here without an order from the king, through BURNKY at *Ava*, said he was the Bo-hmoo-meng-tha's substitute who represented the king here ; he incredulously asked if you did not know the nature of the government here, said I knew nothing and much to the same effect. I told him the treaties of *Yan-da-boo* and *Ava* stipulated for the free passage of traders into all parts of the kingdom : it was with a view to facilitate trade, equally advantageous to both countries or more in their favour, that I had come so toilsome a march, and little expected such a reception. I complained of his having deceived me by the promise of seeing the Tso-hoa ; he told me the treaty did not say a word about my coming to *Monay* and that he had never said I should see the Tso-hoa. I requested that as he had received the Tso-hoa's letter, he would give me the permission therein re-

requested to proceed to *Ava* to acquaint Col. BURNES, for the information of the court of *Ava*, with the result of my endeavours to open the gold and silver road through the *Karian* country. He replied "Oh yes, oh yes, go, go." The whole tenor of his conversation had been most discourteous, and I said I thought the sooner I went the better, and wished to start in two or three days. The first Na-kan then addressed me with much civility and asked if I did not wish to see the *Tso-boa*; I said most certainly. that had been the original purport of my visit, but that it depended on the "Tseet-kay-dau gye" to whom the king had confided the supreme authority here. This seemed to please him, he said "Ah that is a proper answer." The Na-kan again said, "Why you are only just come amongst us and are already talking of leaving us; you must stay with us a little while, it will be necessary to get permission from *Ava* "for you to proceed." I said such was my wish, and that it was with the intent that I should express your wish also to be on the most friendly terms, but as yet I had no reason to believe I was a welcome visitor, and wished to be allowed to proceed without waiting a reference to *Ava* which could only sanction my proceeding, as I dreaded being caught in the rains on account of the people with me having no shelter. The Tseet-kay said sneeringly, "he calls himself 'tsia-woon' (a doctor) and is afraid of dying," of which speech I took no notice.

The Na-kan said I had taken them by surprise, that they had intended me to live in a brick building on the other side of the town. The Tseet-kay interposed and said I might live where I pleased. I asked his advice regarding the best course for traders to take; he said traders had come here before my visit and would continue to do so, that no one prevented them from trading, they might either sell the things where they were, or go to the bazar with them. I repeated my request that if they were satisfied with my intentions, I might see the *Tso-boa*, and after some conference amongst themselves, it was agreed I should see him at the *youn* on Monday (the next day but one). I requested the Tseet-kay to take charge of the presents which he refused to do, saying they were not for him; told me to take them away and bring them on Monday. I objected to this as dragging them about the town would be disrespectful to you, and told him that they had been brought at his request, which he denied, though the bearer of his message to that effect was at my elbow; he however at last took a list of them and gave them in charge to a "Tyke-tsoe," and, took my leave. In the evening MENG-NAY-MYO who has throughout evinced a kind and conciliatory disposition, came to my tent with

two of the Tseet-kay's sons, probably to see how I was satisfied with my reception. I told him that I had conversed with Burmans of all ranks from the king downwards, and had never been addressed as I had to-day; that it was evidently more to their advantage than ours that trade, which was the greatest source of prosperity to all countries, should be opened between us, that it was a bad return for your friendly intentions, and that if the tenor of the conversation on Monday was the same as it had been to-day, however sorry I might be, I saw no alternative but to return by the route I had come and report my reception to you, when the king would be made acquainted with it. He said this was true, but that he had spoken to the Tseet-kay (with whom he is connected by marriage and had great influence) and assured me I should not again have reason to complain, and begged me to say no more about it: when his visit had lasted about an hour, he took his leave. On Monday I sent the Shan interpreter to the Tseet-kay to remonstrate against being seated outside the "*Coon-tseen*," and to request him to send and to let me know when they were ready to receive me at the *youn*. He was for the first time exceedingly civil, requested him to tell me they were here amongst a people of a different nation from themselves, that the customs were different from those of *Ava*, that the Tso-hoa would also be seated outside, and that he would send and let me know when they were ready at the *youn*, which he did at half-past nine, and I proceeded there accompanied by the MENG-NAY-MYO as before. All the military chiefs were assembled and in half an hour, which was employed in friendly conversation, the Tso-hoa with four gold chuttahs, preceded by a guard, arrived and seated himself by me outside the "*Coon-tseen*." He is about 68 years of age, and of the most mild and gentlemanly manners of any Burman I have seen, tall, and fair even for a Shan. I again explained the mistake of the letter and your wishes for a friendly intercourse, and for his and the "Tseet-kay's" protection and assistance to our people coming here to trade, promising a continuation of the same encouragement to his people they had hitherto received at *Maulmain*, and regretted we had seen none of them for the last two years. I said you had heard the *Young-ngoo* road was unsafe to travel, and had dispatched me to open the road through the *Ka-reen-nee* country, which I had succeeded in doing, and hoped the intercourse would now be uninterrupted. I delivered the letter which the "Tseet-kay" had returned me, and a list of the presents was read, and they were laid before him: he replied that it was well, that he was glad to see me, but as he was subject to *Ava*, the letter and presents must be sent there; and I must

wait till permission for me to proceed was obtained from thence, which he thought would be the best course for us all as he could not take on himself to allow me to go on. I remonstrated with all the arguments I could think of against such a delay, but without success. The conversation then became general, principally on geography, the relative power of different states, and the difference of European and Burman customs, on all of which subjects except the last they are profoundly ignorant. The whole interview was conducted in the most friendly manner, and it was difficult to believe the Tseet-kay to be the same person whom I had met here only two days before. On the following day a report was made of my arrival here, the number of people and amount of merchandize to the "Hloot-dau" at Ava. The letter and presents were forwarded to the king and an answer expected in 20 days. I embraced the opportunity to write to the resident a short account of my route so far, and complained of my reception. On the 1st of March I waited on the Tseet-kay at his own house, and used all my endeavours to remove any remaining suspicions he might entertain as to the motive of my visit, and I have every reason to believe I was perfectly successful. He promised every facility to our people trading; said they had better expose some of their things at our encampment where they had a large double zeyat; send some of their people about the town with others, and on market days, which were held every fifth day at one or other of the surrounding villages, they could carry a portion of them out. He promised that there should be no duty levied this time, but probably in future he should be ordered to stamp the goods and levy 10 per cent. as at *Rangoon*. I reminded him of the difference of land and water carriage, the difficulty of the road and great advantage to the purchaser in point of price, &c. He promised in case it was proposed, to use his influence to prevent so heavy a charge. There was a good deal of conversation on other subjects and my visit was altogether satisfactory, my reception civil, kind and conciliatory. I had once to complain of one of the Bhodayea's interfering with the "Poc-zas" (shroffs) which only required mentioning to be redressed, and from this time our intercourse was frequent and most friendly.

On the following day I had a very civil message from the Tso-bo, expressive of his happiness at my visit, and wished to be hospitable, but from my not having brought any letter to the military chiefs he could not be so much so as he wished. He sent me five baskets of rice and forty-eight tickals of coarse silver for my expences, which I was obliged to accept. He wished me to move into the town, but on look-

at the place he intended for me I told him I preferred remaining where I was, and he had huts built for my people near my tent. The traders were in a large zayat 50 or 60 yards off. Between this day and the 25th I called on all the officers who had met me at the *yowm*, and my reception by all of them was civil and friendly.

With the exception of the Tseet-kay and Meng-nay-myo, whose houses are large and commodious, they are worse lodged than the native officers in *Maulmain* and *Tavoy*, or indeed than some of the Thoo-gyees of our villages. I applied once again through MENG-NAY-MYO to the Tseet-kay to see the Tso-boa, if he saw no objection; he gave an evasive answer and as my visit was not returned by any of the officers except MENG-NAY-MYO, my visits were necessarily confined to the Tseet-kay (whom I saw frequently) and him, at his house. I met amongst others the Tseet-kay of Kiang Tung, and some Shan officers of that town who had been sent by the Tso-boa last year, and endeavoured to open a communication with *Maulmain*; but after being detained nine months at *Zimmay* and treated with neglect by the Chow Houa of that place they were refused permission to pass through the *Zimmay* territory. They expressed themselves much delighted at the mission of Lieut. McLEOD. They were on their way to *Ava* with the gold and silver flowers forming annual tribute, and we ultimately entered *Ava* together. On the 8th March we heard the first report of the prince SARAWATTI's rebellion. It was brought from *Ava* in six days by special messenger; it was stated that his quarrel was entirely with the queen's brother. The Tseet-kay was desired to keep the country quiet, as it was likely every thing would be settled in a few days by the prince's capture. The impression of the non-official people I conversed with was, from the first, that unless the queen's brother was given up to him he would have both the power and inclination to take him by force, and the wishes of the people were all in his favour.

The second Bodhayea sent his brother to request me to make his house my own and come and see him frequently, to which I objected as he had not returned my first visit, which accords with the Burman custom, as well as with ours; and they are the last people in the world to whom concessions of this kind can be made. He communicated my message to his brother, who said I was right, and that he would speak to the Tseet-kay on the subject, which he did, and we afterwards repeatedly exchanged visits. Some of the town people came almost daily to my tent; amongst others some Chinamen, residents here, whom I urged to press their countrymen to push on to *Maulmain*; they told me that three or four of them had gone this year to see the state of

the *Maulmain* market, and if a favourable report was made we might expect to see more of them next year. On the 25th I was sent for by the Tseet-kay to the *youn* where I found all the officers assembled. Dispatches had been received from *Ava* containing amongst other things my leave to proceed, orders that I should be treated with attention: a suitable guard given for my protection should I wish to go on in the present unsettled state of the country, and I believe orders also, that I should be allowed to visit the Tso-boa. I received letters from Col. BURNER giving an account of the dreadfully disturbed state of the country, and stating that if the present king should surround *Ava*, which was more than probable, he should be obliged to remove the residency to *Rangoon*; under these circumstances he left it to my own discretion whether I would come on or return by the way I came. Next morning I called on the Tseet-kay and intimated my determination to proceed, leaving the merchants, whose property would have ensured our being plundered, to his care; he told me the Shan countries through which my march lay till within four or five days of *Ava*, were still quiet, but that below the pass I should find every village a nest of robbers, and the road very unsafe. He promised to furnish me with a guard of 20 or 30 men, and some coolies to assist my own to enable us to proceed with greater dispatch, but strongly advised me to return by the way I had come. As I had however determined to proceed, he begged me to put off my departure for a few days; that the party with the tribute from MENG-LEN-GYER had crossed the *Thalween* and were daily expected, and on their arrival I could go in company with them and the *Kiang-tung* people, who only waited for them; our party would then amount to three or four hundred men, the guard with which added to mine would ensure our safety. In the meantime it was determined I should call on the Tso-boa on the following morning, which I did in company with MENG-NAY-MYO. His palace which is within a wooden sort of stockade, is of considerable size with a gilt spire of five roofs, surmounted by a "Tee" or umbrella, as in the palace at *Ava*. The audience hall is large and splendidly gilded about the throne, on which were placed the "*Meng-hmeauk-ta ra-nga-bah*" (five ensigns of royalty), and on each side a white umbrella. He was seated at the edge of the raised floor on which it stands; his son and son-in-law were seated on each side a little in front, and below; I had a seat placed between them. The officers and people about were seated behind me on the floor; my reception was most kind and friendly—he expressed his happiness at my visit and his wish to encourage intercourse, but was so perfectly dependent on *Ava* that he could only act

on orders from thence. My audience lasted about an hour and a half, and when I left him he gave in return for the presents I had brought him, a pair of grey ponies.

On the 30th March I called on the Tset-kay. As nothing had been heard of the MENG-LEN-GYEE party I urged my immediate departure, as in case of being stopped by the robber chiefs on the way to *Ava* and obliged to return by the way we came, we should be thrown into the rains; some of the hills between the *Thalween* and MENG-LEN-GYEE would be nearly impassable, and the jungles there at that season are so unhealthy that on my last mission out of between fifty and sixty people, myself and two others only escaped fever either on the road or after our return. He begged me not to suppose he wished to throw any obstacles in my way, but advised me again to return by the road I had come; as my mind was made up to go on, he wished me to wait till the fifth or sixth of next month, when a part of the Shan contingent of troops furnished by the Tso-hoa are to march on to *Ava*, (the son of the late Yea-woon of *Rangoon* having come in six days from the capital with an order to that effect,) and with that force we should be too powerful for any of the parties on the road.

On the 2nd of April I received the Tso-hoa's letter, but as there was a paragraph stating that in future, traders should not come here without a pass from *Ava*, I waited on the Tset-kay with the treaty of *Ava*, and pointed out that by the first article of that treaty, which an order of the king could not do away with, British subjects had a right to trade to any part of the empire. He immediately promised that it should be altered as it had been written in misconception of the orders from *Ava*, to which Col. BURNES had agreed, that no officer should enter the kingdom in this direction without leave first obtained from *Ava*. He informed me that orders had come to day for the Tso-hoa to proceed in person with 1,500 men.

On the 3rd I called on the Tso-hoa. There is a decided disinclination for the service. He has however determined to leave this on the 6th, expressing himself pleased with the arrangement of my accompanying him, and promising all the assistance in his power on the road. Some of the most adventurous of the traders had determined to accompany me; I however dissuaded them and desired them to remain together. On the 5th when I called on the Tset-kay to take leave, I took the chief of the traders with me and recommended him to his care, which he promised and we parted good friends. He made a speech which he intended for a sort of an apology for his first reception of me, and hoped he should see me here again.

On the 6th I started for *Ava* after a detention at *Monay* of forty-two days. We halted the first day at a small nullah about two miles from *Monay*, and in the afternoon the Tso-hoa came out with his men to some zeyats and pagodas about half a mile nearer the town. MENG-NAY-MYO accompanied me to the halting-place, and the Tso-hoa's son, the Tso-hoa, Tseet-kay and the second Bodhaya visited me in the evening.

On the 7th we made a march of twelve miles to *Hay peck*: some of the troops marched long before day-light: the Tso-hoa passed my tent about six o'clock, and at seven I followed and reached the ground at half-past eleven. A square of low sheds had been erected for the troops, huts for the Tso-hoa and his immediate followers in the centre, and a spot was pointed out to me to the westward of the enclosure for pitching the tents; boughs were furnished for the elephants and graes for the horses; the troops continued dropping in ten or twelve at a time till dark, they are said to amount to 1000 men, one-half armed with muskets the other with spears. In case of an attack, many of the muskets must prove nearly as dangerous to themselves as to the enemy. The few who can muster horses are allowed to ride, altogether without order and mixed with the infantry. Each foot soldier also carries over his shoulder two cowie baskets, and his musket or spear tied to the bearing pole. They march without order, firing off their muskets occasionally along the whole line of the march: all their provisions and ammunition must be carried in their cowie baskets, as except a few coolies of the Tso-hoa's, and one or two other chiefs, there are no carriers with the force. I visited the Tso-hoa in the evening. In this way we marched till the 16th April, through a hilly undulating country, the long faces of the undulations sweeping away almost as smooth as the surface of a snow wreath, with small abrupt rugged rocky hills and ranges projecting as it were through them to a height of from 20 to 150 feet or more; the soil exceedingly poor, almost bare of trees or brushwood, much of it brought under cultivation for dry grain, though the population is scanty. We passed one or two large towns, and the *Pon* and *Bôra-shat* rivers about three and a half feet deep at this season. The Tso-hoa and a part of the force frequently started long before day-light, and the whole was never up till dark. When our encampment lay at a distance from any village the force immediately constructed their sheds of boughs of trees in the same order as on our first encampment, completing the square as they come up.

On the 16th, after daily hearing reports of the most contradictory

and incredible nature, a messenger from his daughter, one of the queens, reached the Tso-ba. He stated that the prince of *Sarawattie* had taken *Ava* without resistance, and put to death three or four of those most inimical to him ; put all the ministers of the old government in irons, and degraded the queen and turned her out of the palace. The Tso-ba is ordered to return to *Monay* and wait for orders to approach the capital, and as all the Tso-bas will probably be called on to bring their congratulations and presents to the new government, he expects to be at this halting-place again in a month. The whole country between this and *Ava* is in the possession of bands of robbers from 100 to 150 in number, and all communication even between one village and another is stopped. The Tso-ba's messengers though wearing the prince's badge, were stripped of every article even to their patsos or cloths. I called on the Tso-ba late in the evening, he was very anxious that I should return with him to *Monay*, where the acquaintance we had formed on the march would give him a plea for paying me more attention than he had ventured to do whilst at *Monay* before. As I was now so near the end of a long and toilsome march I objected to return ; begged him either to send a party strong enough for my protection with me, according to the orders of the late government, or leave me with the Tso-ba of *Neaung Eue* who is one march in advance of us with 500 men, and is to retreat on this place to-day, and return to *Neaung Eue* about 15 miles from this to-morrow. As the government had been changed he reasonably enough objected to sending a party, but agreed I should remain with the *Neaung Eue* Tso-ba, to whom he would introduce me ; either till I received an answer to a letter I had just delivered him for Col. BURNBY, or till he should repossess this way for *Ava*, when he would send to *Neaung Eue*, and we could again proceed together. About midnight an officer came to the tent and told me he had been desired by the *Neaung Eue* Tso-ba to wait on me to know at what time I would start, as he was appointed to shew me the way to *Neaung Eue* to-morrow, and that the Tso-ba had desired him to say, at the request of his elder brother of *Monay*, he should be happy to shew me every attention. At day-light on the 17th the *Monay* troops commenced their retreat by a road lying a little north of the one we had come by, and soon afterwards my guide having made his appearance, I started for *Neaung Eue*, where I arrived the same night.

I called on all the influential people ; viz. the Tso-ba, his two brothers and his son. The brothers returned my visit and sent me several civil messages. They and the Tso-ba also were civil when-

ever I called, but on the whole there was little cordiality in my reception; perhaps the uncertainty regarding the views of the new government were enough to account for this, and we had no communication with the capital for upwards of three weeks. The principality of *Neaung-cue* or *Neaung Sheway*, though reduced within very narrow limits, was at no distant period one of the largest of the nine Tso-boaships; the extensive territory of *Laygen* lately elevated to that dignity formed a part of it. The present Tso-boa, a dull, heavy, vulgar-looking man of about 45 years of age, has been the cause of much distress and misery to the people by a feud of two years with his uncle, during which there were repeated battles fought in the sequestered corners of this valley, and about the banks of a famous and very beautiful lake which occupies about 40 square miles of its southern extremity; he at last succeeded in defeating him (his uncle); but the population of the district was much reduced by emigration of many of the inhabitants to districts a little less harrassed: for they are seldom perfectly quiet. He was involved in debt by the bribes he was obliged to make at court to procure his investiture; to liquidate which he has ever since exercised a system of extortion on the people which has rendered him very unpopular.

On the 13th of May after an anxious detention of a month I received the expected order from *Ava*, authorizing me to proceed, and a suitable guard to be furnished me, which the resident had obtained with difficulty after several days' discussion with the new government, (during which the king first intimated his determination not to abide by the treaty of *Yan-da-boo* or *Ava*); the order had been sent through head-quarters at *Monay*, and as the party from *Keintuany* with the annual tribute was expected to reach *Pochla* (which is one long day's march from this) in four or five days after the order would reach me, the Tseet-kay sent a message by the people who brought it, advising me to join them at that place, when we should form a party of nearly 200 people, and strong enough to bid defiance to any of the marauding parties which still infested the road. On the morning of the 18th, I left *Neaung-cue*, but owing to the unmanageableness of one of the elephants and the loss of two of our horses, I did not reach *Pochla* till next night, where we found the Shans had arrived in the morning. The following day continued our march for *Ava*. On the 23rd at the village of *Yca-guan* we met the *Shoe-hlan-bo* who has been appointed governor of the Shan countries under the new government, in the room of *Meng-myat-boo* the king's brother; as his is the supreme authority now throughout the whole country from *Nat-like* to *Kein-young-gyee*,

I halted here one day to have an interview with him, and endeavoured to procure his interest in favor of a free communication with the provinces. My reception was civil, and he professed himself an advocate for the freedom of intercourse now commenced. At his earnest request I sold him one of the elephants. My visit lasted about an hour, and at parting he gave me a *Patsoe*. On the 25th we descended the *Nat-like* pass, the longest and most laborious pass in the Burman dominions, or that is known to exist in any of the neighbouring countries. The foot of this pass opens into the valley of the *Irrawuddie*, called the *Lap-dan* or royal fields, a dead level which reaches, at this end where it is narrowest, to the *Tset-kyne* hills at *Ava*. A little more to the southward it runs still further west to the hills on the frontier between *Ava* and *Monpooor*. The descent raised the thermometer 12 or 14°. From this to the capital had been, and still was at the time of our passing, one scene of pillage and robbery; and I had much difficulty in getting the Shans to start before day-light, which was now necessary from the heat, though I believe our party was numerically strong enough to frighten any of the bands of robbers; however in point of fact it was almost defenceless from the order or disorder of our march, and the difficulty of getting at any ammunition beyond what the guard might have in their muskets. We however crossed the plain in four days and reached *Ava* on the 28th of May without molestation. The nature of the country from *Neaung-eue* to the top of the *Nat-like* pass is a good deal of the same character as from *Monay* to *Neaung-eue*. The road may be in some places a little better and the population a little more numerous. From the bottom of the pass to *Ava* though the soil is not rich it is well watered by several large streams, and being nearly level it is favorable to irrigation, and is as well peopled as any part of the kingdom, except the angle between the junction of the *Kin-dween* and *Irrawaddie*. The road all the way from *Monay* to *Ava*, with the exception of the pass, is very tolerable and well frequented. On the following day I waited on the king with the resident and his assistant. As there was no business transacted this day, he was affable and pleasant. He bought my remaining elephants at prime cost, and presented each of us with a small ruby ring, the first he had become possessed of since his seizing the throne. I remained in *Ava* till the 17th of June when I left with the resident, his assistant, and all the *American* missionaries whom the king had prohibited from continuing their labours. From the strength of the monsoon our passage down the river was tedious and we did not reach *Rangoon* till the 6th of July.

III.—*Comparison of Indo-Chinese Languages, by the Rev. N. BROWN, American Missionary stationed at Sadiyá at the north-eastern extremity of Assám.*

Considerable time has elapsed since a proposal was made through the *Christian Observer* for collecting short vocabularies of all the languages between India and China. In pursuance of the plan then proposed, have been received, through the kindness of several literary gentlemen, vocabularies of *twenty-seven* languages, specimens of which are prepared for insertion in the periodical above named; but as the subject is equally interesting to the general student and philologist as to the missionary, I have thought a copy of the paper would not prove unacceptable to your pages*. For *twelve* of these vocabularies, viz. the *Manipuri, Songpá, Kaperi, Koreng, Maram, Champlung, Luhuppa, Northern, Central and Southern Tánghul, Khoibá, and Maring*. I am indebted to the indefatigable exertions of Capt. GORDON, Political Agent at Manipur, author of the *Manipuri Dictionary*; to the Rev. C. GUTZLAFF for vocabularies of the *Anamese, Japanese and Corean*; to the Rev. J. I. JONES, Bangkok, for that of the *Siamese*; for the *Gáro*, to Mr. J. STRONG, Sub-Assistant to the Governor General's Agent for A'sám, and to Rev. J. RAE, of Gowaháti, for the *A'kó*. Most of the remaining languages given in the table have been written down from the pronunciation of natives residing in the neighbourhood of Sadiyá.

Although I have as yet received vocabularies of but a small portion of the languages originally contemplated, I have thought it advisable to give specimens of such as have been obtained, hoping that others may be induced to extend the comparison by publishing specimens of other languages†. The names selected are those of the most common objects, and may therefore be regarded as the earliest terms in every language, and such as were least liable to be supplanted by foreign words.

The words given in the table are written according to the Romanizing system; and although there may be some slight variations in the sounds of particular letters, in consequence of the vocabularies having been made out by different persons, yet it is believed they will be found sufficiently uniform for all the purposes of general comparison.

I now proceed to give such remarks upon the several languages contained in the table, as have been furnished by the individuals engaged in compiling the vocabularies.

* We need not assure the author, to whose studies we have already been more than once indebted, how acceptable the comparison he has undertaken is to our own pages; but it may encourage his inquiries and stimulate his zeal to hear that every letter from Paris, where philology seems to have now the most successful cultivation, presses this very object upon our notice.—ED.

† Mr. TREVELYAN has kindly favoured us with copies of the printed vocabulary, which we shall lose no time in forwarding to those interested in this train of research, especially to obtain lists of the hill dialects of all parts of India.—ED.

I.—*Bangali* and *A'sámese*. These languages being derived from the *Sanskrit*, possess a close affinity to each other. It appears from the table that above six-tenths of the most common words are identical, except with slight variations of pronunciation. The most important of these are the substitution of *s*, in *A'sámese*, for the Sanskrit *ch*, and a guttural *h* for the Sanskrit *ś* and *sh*. The vowels have also undergone considerable variations. The grammatical peculiarities of the two languages are considerably unlike. In the inflection of nouns and verbs, they both bear a strong resemblance to the Latin and Greek languages, with which they have a large number of words in common. The numerals are evidently derived from the same source with the Greek.

The *A'sámese* possesses six cases of nouns corresponding to those of the Latin, to which may be added a seventh, or *Locative* case, expressed in English by the prepositions *at* or *in*. The terminations of the cases are as follows :

<i>Singular.</i>		<i>Plural.</i>
<i>Nom.</i>		<i>Nom.</i> <i>hont</i> ,— <i>bilak</i> , or <i>bur</i> .
<i>Gen.</i>	<i>r</i> .	<i>Gen.</i> <i>hontor</i> ,— <i>bilákor</i> , &c.
<i>Dat.</i>	<i>lui</i> .	<i>Dat.</i> <i>hontolui</i> .
<i>Acr.</i>	<i>k</i> .	<i>Acc.</i> <i>hontok</i> .
<i>Voc.</i> as the <i>Nom.</i>		<i>Voc.</i> as the <i>Nom.</i>
<i>Abl.</i>	<i>re</i> .	<i>Abl.</i> <i>hontore</i> .
<i>Loc.</i>	<i>t</i> .	<i>Loc.</i> <i>hontot</i> .

A peculiar feature of the *A'sámese* is the use of two pronouns for the second person, according as the person addressed is superior or inferior to the speaker. This distinction is also marked by a different termination of the verb, thus :

<i>Singular.</i>		
<i>First person,</i>	<i>Moi máruṅ</i> ,	<i>I strike.</i>
<i>Sec. person,</i>	<i>Toi máro</i> ,	<i>Thou strike-t.</i>
<i>Do. (honorific,)</i>	<i>Túzi mára</i> ,	<i>You strike.</i>
<i>Third person,</i>	<i>Hi máre</i> ,	<i>He strikes.</i>
<i>Plural.</i>		
<i>First person,</i>	<i>A'mi máruṅ</i> .	<i>We strike.</i>
<i>Sec. person,</i>	<i>Tohont maro</i> ,	<i>You strike.</i>
<i>Do. (honorific,)</i>	<i>Tumulák mára</i> ,	<i>Ye strike.</i>
<i>Third person,</i>	<i>Hihonté</i> , or <i>hibiláke</i> , <i>máre</i> ,	<i>They strike.</i>

From this specimen, it may be seen that the verb undergoes no alteration on account of number.

Adjectives, in *A'sámese*, have no declension, nor are they varied to denote the degrees of comparison. These are expressed by means of the suffix *kui*, *than*, added to the locative case of nouns ; as, *íatkui dāngor*, *great [or] than this* ; *ataitkui dāngor*, *great [er] than all*, i. e. *the greatest*. The same particle is also used in changing adjectives to adverbs, like the syllable *ly*, in English ; thus, *khôr*, *swift* ; *khorkui*, *swiftly*.

Nouns, in whatever case, almost invariably precede the verbs with which

they are connected. From the variety of cases, it will readily be inferred that the use of prepositions, or particles having the force of prepositions, is seldom required. When such particles are used, they must invariably follow the nouns which they govern. The genitive case always precedes the noun by which it is governed.

II.—*Siamese, Khamti, and other branches of the Tai.* We have seen that the Bangali and Asamese, in their grammatical forms, bear a close resemblance to the family of European languages. We come now to a class of monosyllabic languages evidently belonging to the Chinese stock. In these languages the nouns and verbs uniformly consist (except where foreign terms have been introduced), of monosyllabic roots, which undergo no change on account of case, mood or tense. These accidents are expressed by means of particles, generally following, but in some cases preceding, the nouns or verbs which they modify. A striking peculiarity, which, so far as we have had opportunity to examine, extends to all monosyllabic languages, is the variety of *intonations*, by which sounds organically the same are made to express entirely different meanings. The first division of tones is into the *rising* and *falling*, according as the voice slides up or down during the enunciation of a syllable. This variety of tone is employed, in English, mostly for the purposes of emphasis and euphony; but in Tai, Chinese, Barmese, &c. such a variation of tone produces different words, and expresses totally different ideas. Thus in Tai, *má* signifies a *dog*, *má* (the stroke under the *m* denoting the falling tone) signifies *to come*. In Barmese, *lé* is *air* but *lé* is a *bow*; *myen* is the verb *to see*, while *myen* denotes a *horse*.

Another distinction of tone which obtains nearly or quite universally, in monosyllabic languages, is the *abrupt termination*, or a sudden cessation of voice at the end of a syllable. This is denoted by a dot under the final letter. Like the other variations of tone, it entirely changes the meaning of the words to which it is applied. Thus, taking for illustration the syllables above mentioned, *má*, in Tai, signifies a *horse*; in Barmese, *lé* signifies *to be acquainted with*; *myen*, *high*.

These two varieties of intonation are the most extensive and important; but several languages of the Chinese family make still more minute distinctions. The Chinese language itself is said to distinguish eight different tones; the Tai possesses five or six; the Karen an equal number; the Barmese only three, viz. the rising, falling, and abrupt.

The *Siamese, Láo, Shyón, Khamti and Ahom*, are all merely dialects of the same original language, which is called *Tai*; and prevails through a wide tract of country, extending from Siam to the valley of the Brahmaputra. I have inserted in the table specimens of the Khamti and Siamese, spoken at the two extremities, between which the difference will naturally be greater than between the dialects spoken at any of the intermediate stations. Yet we find that upwards of nine-tenths of the fundamental words in these two dialects are the same, with but slight variations in the pronunciation. These variations are mostly confined to a few letters, viz.

ch, which the northern tribes change to *ts*; *d*, for which they use *l* or *n*; *r*, which becomes *h*; and *ua*, which they exchange for long *ô*.

Different systems of writing have been introduced to express the sounds of the *Tai*; the Khamti and Shyán alphabets are evidently derived from the Barmese; the Láos is nearly related to the Barmese, but more complete and better adapted to the wants of the language than the Shyán; while the Siamese character bears only a remote resemblance to the Barmese.

All the dialects of the *Tai* have nearly the same grammatical construction. The arrangement of words in sentences is, for the most part, as in English; unlike other eastern languages, where the words are generally placed in an inverted order. The nominative precedes the verb; the verb usually precedes the objective. Prepositions always precede the nouns which they govern. The possessive case follows the noun by which it is governed, as *mū man*, the *hand* [of] *him*, i. e. *his hand*. Adjectives follow the nouns which they qualify.

A striking feature in many eastern languages both monosyllabic and polysyllabic, is the use of *numeral affixes*, or, as they have sometimes been called, *generic particles*. These particles are affixed to numeral adjectives, and serve to point out the genus to which the preceding substantive belongs. Thus in *Tai*, the expression for *two elephants* would be, *tsáng song tó*, *elephants two bodies*. When the number is *one*, the generic particle precedes the numeral, as *tsáng tó nūng*, *one elephant*. In Barmese, the generic particles invariably follow the numerals, as *lú ta-yauk*, *man one person*; *lú nhi-yauk*, *men two persons*, i. e. *two men*.

III.—*I'ká* and *A'bor*. These languages have been but partially examined; it is evident, however, from the table, that they are closely allied to each other, nearly half the words being found alike in both. One-fifth of the words agree with the *Mishimi*; and a considerable number with the Barmese, Singpho and Manipur.

The *A'bors* occupy the lofty ranges of mountains on each side the river *Diháng*, or *Tsámpá*, and are probably very numerous. The *Miri* is a dialect of this language, which is spoken by the people of the plains; but is said not to be essentially different from the language of the highlands.

IV.—*Mishimi*. This language is spoken by the inhabitants of the mountainous regions on the river *Diháng*, east of the *Abor* country. Little is known of them. There are three principal tribes, the *Idí Mishimis*, the *Taron* or *Digará Mishimis*, and the *Maiyi* or *Meme Mishimis*. Their language is substantially the same. It is distinguished by several very peculiar tones, and some of its consonants are extremely difficult of enunciation. In this respect it differs from the *Abor*, the sounds of which are easy and flowing.

V.—*Barmese*. This language is originally monosyllabic, although it now contains many polysyllabic words. These are mostly terms belonging to their religion, which have been introduced from the *Páli*, their sacred language. The Barmese delights in the multiplication of synonymous

words, which follow each other in close succession and serve to render many terms definite which would otherwise be ambiguous. Pāli words are generally followed by their synonyms in the vulgar tongue. Thus the usual expression for *earth* is *pathawī myēgyī*; *myēgyī* (great earth) being the vulgar term, and *pathawī* the Pali or Sanskrit.

The order of arrangement in Barmese is almost directly the reverse of the English. As an example of this, take the following sentence: *He said, I am the voice of one crying, make straight in the wilderness the way of the Lord, as said the prophet Esaias.* The verse in Barman stands thus: *The prophet Esaias said us, The-Lord of the-way the-wilderness in straight make, crying one of the-voice I am, he said.*

In Barmese, the affixes to nouns, verbs and numerals, are very abundant, many of them merely euphonic. Great attention has been paid to euphony in the formation and cultivation of this language. This is particularly seen in the change of the hard consonants, *k, p, s, t*, to the corresponding soft letters, *g, b, z*, and *d*. Thus *E'rāwati* (the river) is invariably pronounced *E'rāwadi*, though written with a *t*; *Gotama* (their deity) is pronounced *Goduma*, &c. All the affixes, whether of verbs, nouns, or numerals, beginning with a sharp consonant, universally exchange it for a soft one, except where the verb or noun itself ends in a sharp consonant, in which case euphony requires that the affix should begin with a sharp, as the enunciation of a flat and sharp together is peculiarly harsh and difficult. We also trace this principle in the Manipuri language, where the verbal affix is *ba*, unless the verb ends in one of the sharp consonants *k, t*, or *p*, when the affix is invariably *pa*. Capt. Gordon does not inform us whether this principle extends to the other affixes in Manipuri, but, from the similarity of the two languages, it seems not improbable that such may be the case.

VI.—*Karen*. I have been disappointed in the hope of obtaining a perfect vocabulary of this language. The few words inserted in the table will, however, give some idea of its affinities. It most resembles the Barmese and Manipurean dialects, though it is essentially different from either. Its tones are five; the same in number with those of the *Tui*. Several of them, however, appear to be different from those of any other tribe. No final consonants are allowed in Karen.

VII.—*Singpho and Jiti*. The Singpho possesses many words in common with the Abor, the Barmese, and the Manipurean dialects. It is the language of extensive tribes, occupying the northern portions of the Barman empire. The intonations are similar to the Barmese, and its grammatical construction is almost precisely the same. It is peculiar for its combinations of consonants, many of which would at first sight appear quite unpronounceable to a European. It doubtless belongs to the monosyllabic stock of languages.

The *Jiti* are a small tribe who formerly occupied the highlands in the northern part of Barmah, but have been driven from their country by the Singphos. The tribe is now nearly extinct. Their language appears to

have been a dialect of the Singpho, seven-tenths of their vocables being found in that language.

VIII.—*Gáro*. For a vocabulary of the language of this singular people we are indebted to Mr. STRONG, of Goalpára, who from frequent intercourse with this tribe, has had opportunity to become well acquainted with their language and customs. In the specimen given in the table, the orthography of a few words has been slightly altered, so as to conform to the Romanizing system. The language appears to have considerable relation to the Singpho and Jili. It is difficult to decide from the specimens before us, whether it is to be ranked with the monosyllabic or polysyllabic languages. It probably belongs to the latter. The Gáros inhabit an extensive range of hills below Gawaháti, and are in a completely savage state. So meagre is their language, that they have not even a term for *horse*, nor do they possess any knowledge of such an animal.

IX.—*Manupuri* and *neighbouring dialects*. The following very interesting account of the singular variety of languages spoken in the neighbourhood of Manipur, is copied from Capt. GORDON's letter to Mr. TREVELYAN.

"I send you specimens of (including the Manipuri) twelve of the numerous languages, or perhaps more properly, as respects many of them, dialects spoken within this territory. On examining PEMBERTON's map, you will perceive that, beginning in the west with the *Songpá*, (here commonly confounded with the *Kapwí*, a much smaller tribe,) I have, in my course round the valley, reached the parallel of latitude from which I first set out, having described rather more than a semicircle. This is, however, but the inner of the two circles I propose completing, and until I have made some progress in my way round the outer one, I feel that I shall not be able to furnish satisfactory replies to the queries respecting particular tribes.

"In several directions, but more especially in the north-east, I am given to understand the languages are so very numerous, that scarcely two villages are to be found in which they are perfectly similar. This, I apprehend, arises from the propensity to change inherent in all languages, and which, when left to operate unrestrained by the check which letters impose, soon creates gradually increasing differences of dialect amongst a people originally speaking the same language, but who have become disunited, and between whom little intercourse has afterwards subsisted. To the same cause is, I believe, attributed the great diversity of languages and dialects spoken by the aborigines of America, particularly in Brazil, where communities composed each of a small number of families are said to speak languages unintelligible to every tribe around them. Aware of this circumstance as respects a country more favorable to intercourse than the mountainous territory surrounding Manipur, I was not much surprised at finding instances of the same kind in this vicinity. The language spoken in *Champhung* is only understood by the thirty or forty families its inhabitants. The majority can speak more or less of Manipuri, or the languages of their more immediate neighbours; but I am told that there

are individuals who require an interpreter in conversing with persons not of their own very limited community. Dialects so nearly similar as are those of the *Northern* and *Central Túngkhuls*, are generally intelligible to the adult male population on both sides. But the women (the two tribes in question seldom intermarry) and children, who rarely leave their homes, find much difficulty in making themselves understood. Neither of the tribes just named understand the language spoken by the *Southern Túngkhuls*, and that again differs us widely from the languages of the *Khoibús* and *Murings*. The southern Túngkhuls tell me that their language is spoken by the inhabitants of a large village named *Kambi-muring*, situated somewhere to the westward of the northern extremity of the *Kabó* valley. I mention this to show why I as yet do not feel myself competent to give satisfactory replies to the queries concerning particular tribes. I however think I can discover a connection (I do not include the *Tai*) between all of the languages in this quarter that I have yet examined, sufficiently intimate to warrant me in assigning a common origin to the tribes by whom they are spoken. From these tribes, which I imagine to be the aborigines of the country, extending east and south-east from the Brahmaputra to China, I derive both the Barmese and the Manipuris. To the Shyáns, I assign a different origin."

X.—*Anamese* or *Cochin-chinese*. The vocabulary of this language has been furnished by Rev. Mr. GUTZLAFF, from whose letter are extracted the following additional particulars.

"The *Anamese* spoken in *Cochin-china* and *Tunkin* with very little difference, might be considered as a coarse dialect of the Chinese, if the sounds wherewith the characters are read were also current in the spoken language. But the oral dialect totally differs from that used in perusing the books in the Chinese character, and the construction likewise deviates materially. It is however monosyllabic; has intonations and all the characteristics of the Chinese, though the *Anamese* have fuller sounds, and use various letters and diphthongs which no Chinaman can pronounce correctly. The learning of the natives is entirely confined to Chinese literature, in the acquiring of which they are by no means celebrated. There exist a number of short-hand Chinese characters, which are used as syllabaries to express sounds without reference to their meaning; but they have not yet been reduced to a system, and are used in various ways. The language itself is spoken with a very shrill voice, and appears to a foreigner very uncouth. It bears only a slight resemblance to the Cambodian, but otherwise with no other dialect of the Eastern Peninsula*."

XI.—*Japanese*. Mr. GUTZLAFF says, "This language is spoken with very little variation, by about 20 millions of people, who inhabit the Japanese islands. It is polysyllabic, and only resembles the Chinese so far as it has adopted some words from that language, which are however

* We shall soon know more of this from the Bishop's dictionary, now nearly through the press.—Ed.

changed, according to the organs of the natives, like the Latin and Greek words in our tongue. Having numerous inflections and a regular grammar, in a few points resembling the Mántchú, it is easier to express our ideas in it than in the Indo-Chinese languages. The Chinese character is universally read amongst the natives with a different sound and accent, more full and enphonical. For the common business of life, the Japanese use three different syllabaries, the *Katakana*, *Hirakana*, and *Imutskana*, which consist of certain Chinese contracted characters, and amount to 48. From hence it appears that all the radical syllables of the language are no more than 48, which by various combinations form all the words of one of the most copious languages on earth. Its literature is very rich. The Japanese have copied from and improved upon the Chinese, and have also availed themselves of the superiority of our European literature."

XII.—*Corean*. In regard to this language, Mr. GUTZLAFF makes the following remarks.

"*Coreu* is little known, and the language still less. The collection of words here inserted was copied from MEDHURST'S VOCABULARY. This nation has likewise adopted the Chinese character, and is in the possession of the same literature; but in point of civilization it is below its teachers. The Coreans have a syllabary of their own, far more intricate than the Japanese, and formed upon the principle of composition. It consists of few and simple strokes, and is not derived from the Chinese character. Fifteen consonants and eleven vowels are the elements, which form 168 combined sounds, the sum total of the syllabary. The influence of the Chinese Government in this country has been far greater than in Japan, and hence the language is far more tinged with the language of Han. There are a very great number of composita, of which the first syllable is native and the last the Chinese synonym, pronounced in the Corean manner. We have not been able to discover any declension, but it is not unlikely that it has a few inflections. Many words resemble the Japanese, and the affinity between these two nations is not doubtful. The language being polysyllabic, does not require any intonation, and if such exist, it has entirely escaped our notice."

I now proceed to give specimens of all the languages and dialects of which vocabularies have been received: to which I shall add a table showing the number of words per cent. which in any two languages agree, or are so similar as to warrant the conclusion that they are derived from the same source. It must be noted that the words are spelled according to the Romanized orthography. The vowels are sounded as follows:—

a as in <i>America</i> , woman.	á as in <i>far</i> , father.
e " <i>men</i> .	é " <i>they</i> .
i " <i>pín</i> .	í " <i>police</i> .
o " <i>nor</i> , <i>not</i> .	ó " <i>note</i> .
u " <i>put</i> .	ú " <i>rule</i> .
ü " <i>lune</i> , (French.)	

The letter *h* is always used strictly as an aspirate, whether at the beginning of a syllable, or following another consonant. Thus *th* is sounded as

in priesthood, not as in *think* ; sh as in *might*, not as in *ship* : ph as in *uphold*, not as in *philosophy*. *Th* and *sh*, when used to express their English sounds as in *think*, *ship*, are printed in italics. The French nasal *n* (as in *enfant*) is expressed by *ñ*, with a dash underneath.

English.	Bangálí.	A'sámese.	Khamtí.	Siamese.
Air	báyu	botáh	lum	lóm
Ant	pipillká	póruf	mut	mót
Arrow	tir	kágr	lempün	luk son
Bird	pakhyi	soral	nók	nók
Blood	rakta	tez	leüt	liut
Boat	nauká	nau	heü	rña
Bone	aethi	hár	núk	kra dék
Buffalo	mahish	móh	khwai	khwa i
Cat	biál	mekúri	miú	meau
Cow	garu	gói á	ngó	ngón
Crow	kák	kauri	ká	kó
Day	din	din	wan	wau
Dog	kukkur	kókúr	má	má
Ear	karna	káu	há	há
Earth	máti	máti	lung nin	din
Egg	anda	kóni	khai	khai
Elephant	hasti	hátí	tsáng	chháng
Eye	chhakhyuh	sóká	tá	tá
Father	pitá	bupai	po	po
Fire	agni	jái	fai	tai
Fish	matsyn	más	pá	plá
Flower	pu-hpá	phúl	mok	dok mai
Foot	pád, charan	bhóri	tin	tin
Goat	chhagal	sh-góli	pe	pe
Hair	kesh, chul	súli	phum	phóna
Hand	hat	hót	mü	mi
Head	mastak	már	hó	hou
Hog	shúkar	gáthóri	mú	mú
Horn	shringa	hing	khau	khau
Horse	ghórá	ghótá	má	má
House	ghar	ghor	heita	rñau
Iron	laitha	lu	lék	lek
Leaf	pátá	pát	muü	bai
Light	dipti	pohor	leng	seng
Man	manuashya	mánúh	kua	khón
Monkey	bánar	bándor	ling	ling
Moon	chandra	jun	leñ	düaa
Mother	janani	ai	me	me
Mountain	parbat	porbot	noi	phu khau
Mouth	mukh	múkh	pák	pák
Musquito	mashá	muh	yáng	yung
Name	uim	nán	tsü	chhi
Night	rétrí	rátí	khün	khün
Oil	tail	tel	nam man	nam man
Plantain	kalá	kolá	kué	klui
River	nadí	nói	me nam	me nam
Road	rastá, bát	bát	táng	táng
Salt	laban	lun	kü	klüa
Skin	charma, chháí	shál	nang	nang
Sky	ákásh	ákásh	fá	fá
Snake	shápp	háp	ngó	ngó
Star	tará	toiá	náu	dáu
Stone	prastar	híi	hia	hín
Sun	súrjya	beli	wao	tawan
Tiger	bagh	bágh	scü	süa
Tooth	danta	dánt	khia	fan
Tree	gáchh	gosh	tun	tón mai
Village	grám	gawp	mán	bán
Water	jal, páni	páui	nam	nam
Yam	álu	áiá	hó man	hós man

English.	A'kó.	A'bor.	Mishimi.	Burmese.	Karen.
Air	dori	ásár	érené	lé	kali
Ant	tárak	tárak	árúang	payuetsaik	tahrisá
Arrow	apak	epágh	mpú	mya	—
Bird	putáh	pettáng	tsá	nghet	thó
Blood	oyi	—	harri	thwé	—
Boat	hulung	etkú	rruá	lhé	khli
Bone	sula	álong	rúbóh	ayó	—
Buffalo	mend.k	menzek	máji	kyue	páná
Cat	ásá	kedási	madzári	kyaung	saminyo
Cow	shye	sóu	mátsokrú	nuá	klo
Crow	pák	pivág	tsáklá	kyi	—
Day	húmpáh	longe	kihingge	né	ní
Dog	eki	ekki	nekó	khwé	tui
Far	nyátung	nórun	nakrá	ná	nuku
Earth	—	ámóng	tari	myé	khí
Egg	pápák	tokpi	mtiúmaie	u	—
Elephant	húti	syite	dátóu	ahen	kátsho
Eye	nyek	ámig	malam	myetsai	mekhlí
Father	abba	hábu	uáhlá	aphé	pá
Fire	umunah	eme	uámíng	mi	mé
Fish	ngay	engo	tá	ngá	nyá
Flower	pung	ápun	apú	pánbwen	—
Foot	lagá	ale	ngroh	khýé	khodu
Goat	shubam	sohen	mádzé	ahéik	metele
Hair	demuk	dúmid	thúng	ahaben	khósá
Hand	luk	elág	átuá	let	tsu
Head	dumpa	dúmpóng	mkúra	ghaung	khó
Hog	kukpu	éek	báll	wet	thó
Horn	kung	áreng	rruá	khýu	—
Horse	ghuá	buré	garre	myen	ká-é
House	á	ekum	bóu	eing	hi
Iron	kakdhar	yogid	sí	thán	tá
Leaf	nabar	anne	náh	yuet	—
Light	hang tepá	pángo	tsónáwo	len	—
Man	bangae	ámi	name	lá	prá
Monkey	lebe	sibie	tamrm	myauk	—
Moon	pala	polo	haluá	la	la
Mother	ane	náne	náma	amé	mo
Mountain	nodi	adi	thaiyá	taung	kátsá
Mouth	gám	ncpáng	takú	nhók, pazát	thákhó
Musquito	tarang	xunggu	tádze	khýen	pátso
Name	—	ámiu	amúng	námo	ámi
Night	ia	kámo	lá	nyin, nya	—
Oil	tel	tuláng	suá	shí	só
Plantain	kepák	kopág	pháji	nghetpyo	sákwí
River	subang	botte	tsaló	myit	thimop
Road	lamtau	lambe	ailam	lán	klo
Salt	alla	álo	pláh	shá	isá
Skin	supen	n-ig	kuá	thnyé	—
Sky	ápá	taling	briá	mó	mákhó
Snake	tabuk	tahí	táhu	myué	bru
Star	takar	tekar	kadaung	kye	sá
Stone	elung	mplá	mplá	kyaukkhe	le
Sun	dahani	áruug	wanyi	né	mu
Tiger	samuya	simioh	tányah	kyá	bosá
Tooth	phu	lpáng	llá	thwá	—
Tree	sangné	sine	masang	thitpen	áthá
Villages	nampum	dólung	máting	yúá	wé
Water	issi	ási	máchi	yé	thi
Yam	—	engin	gi	myaukkhaung	nuo

English.	Singpho.	Jih.	Gáro.	Manipur.	Songphá.
Air	mbóng	mbóng	barówá	nuogait	mpoan
Ant	kagin	tsaunglang	shámachak	kakchong	nteang
Arrow	palá	malá	bra	tel	ló
Bird	wá	machik	dábring	áchek	nroi
Blood	sai	tashai	kanchai	i	zyai
Boat	lí	tali	ring	hi	híi
Bone	nráng	khamráng	gring	sarú	karau
Buffalo	ngi	ug lui	mátma	iroi	woirhol
Cat	ngyau	tengyau	menngó	haudong	myanó
Cow	kausú	tanga	machá	samuk	woitona
Crow	kokhá	takhá	doká	kwák	aghak
Day	sini	taná	áló	nuongthil	kalthén
Dog	kwi	tak wí	áchak	hwi	shí
Ear	ná	kuwá	náchil	ná	anhúkon
Earth	nggá	taká	hár	laipák	kandi
Egg	wúdi	matí	dúchi	yerum	nroidui
Elephant	magwí	tsáug	moungmá	sámá	woipong
Eye	mi	njú	mokron	mit	mhik
Father	wá	va	ásá	l; á	apú
Fire	wau	tuvan	wol	mai	nái
Fish	ngi	tangá	nátok	ugá	khá
Flower	sabanpá	saban	bihál	lai	nhuu
Foot	lagóng	takkhyai	jáchok	khong	phai
Gout	paioam	takhyen	dóhak	hameng	zyá
Hair	kná	kará	kiní	sam	sam
Hand	letá	taphén	jak	khut	bán
Head	bóng	nggum	shikam	kok	pí
Hog	wá	tavak	wok	ok	ghák
Horn	rung	salung	grong	machí	kachai
Horse	kamráng	khamráng	—	sagol	takouu
House	ntá	kin	nók	yim, sang	kái
Iron	wprí	taphí	shel	yot	ntan
Leaf	lap	lap	bolbujak	lá, maná	nhui
Light	thói	thiwé	shingá	ngáibu	ghéu
Man	simpho	u-sang	mnude	ui	mai
Monkey	wé	tawé	hármak	yong	nkoí
Moon	sntá	sntá	jájong	thá	bú
Mother	nú	nú	amá	luá	apui
Mountain	bóm	sutóng	áchúrá	ching	cheing
Mouth	nggóp	nóng	kóvak	chil	mhong
Musquito	sigrong	pakyók	gauggiá	kang	chakhóng
Name	ming	taming	bimong	ming	kazyann
Night	saná	sanap	wálo	ching	yinihang
Oil	namman	namman	tochai	tháu	tháu
Plantain	langó	khungó	tarik	laphoi	háu
River	khá	talau	chimá	túrel	duidái
Road	lam	tanglong	rámá	lampí	cheug
Salt	tsám	chám	kárasam	thúma	otai
Skin	phí	maphik	bigil	mawul	kugi
Sky	mó	mamó	srigi	nongthaurai	tiugpak
Snake	lapú	tapú	chapi	lil	nruí
Star	sagan	sakan	ésáhe	thawáibichak	ghauchong-
Stone	nlóng	talóng	rangta	nung	ntáu (ua
Sun	tsan	katsán	sálgá	númit	naimhik
Tiger	saióng	kasá	machá	kai	kumbang
Tooth	wá	kóng	wágam	yá	hó, nai
Tree	pbun	plán	bolbiphang	ápái	thingbang
Village	mareng	mbat	song	khái	nhau
Water	ntsin	mchiu	chí	ialog	duí
Yam	nai	nai	tájong	bá	rau

English.	Kapwí.	Koreng.	Marám.	Champhung.	Luhuppa.
Air	thiáng	tinghun	nhlut	phanré	masi
Ant	tauglu	mateangpwi	nteng	chingkhá	chaling
Arrow	than	takyen	nlá	malá	malá
Bird	masá	nthikna	aroi	ngáthe	vá
Blood	thí	tazyai	azyi	azí	ashí
Boat	lí	mali	nlí	marikho	marikhong
Bone	mará	país	mahá	sorú	arú
Buffalo	snloi	alui	aghoi	ngalúí	siloi
Cat	topisá	myauná	tokpé	hángaubí	lámí
Cow	tom	matom	atom	shemuk	simuk
Crow	mué	nget	chagbak	khalé	hangkhá
Day	tamlái	nin	lálá	ngasinlung	ngasun
Dog	wí	tasí	nthí	aval	thú
Ear	kaná	kon	inkon	khunú	kháná ; †
Earth	talai	kadi	nthá	ngulai	ngulai ; ~
Egg	makatui	pabum	nroighum	ngori	harú
Elephant	tapong	chapong	mpong	piobí	maú
Eye	mik	mik	mik	amak	inik
Father	apá	apá	apá	iho	avá
Fire	mai	chamí	mai	amai	mai / ~
Fish	ncá	chakhá	khái	akhai	khái
Flower	rai	charápen	pán	abun	won
Foot	kí	chapi	phai	aphai	phai
Goat	ken	kami	khamí	amú	me
Hair	sam	tatham	thám	sum	sam ; ~
Hand	kut	chaben	ván	apán	páng
Hend	lú	chapi	api	kau	kui ; ~
Hog	bok	kabak	wok	nvak	hok ; ~
Horn	takí	puke	tí	rat-sú	ngachi
Horse	takoan	chakoa	chakon	ngol	sikwí ~
House	in	chaki	kui	arú	shim
Iron	thín	chaghi	kaphá	aruk	tin
Leaf	ná	panú	alui	singnú	ná
Light	bán	ben	ghen	wár	hor
Man	mí	chamai	mí	samú	mí
Monkey	kazyong	tazyong	kazyong	khayo	nayong
Moon	thá	charhú	lhá	asábi	kacháng
Mother	anú	apwi	apwí	ipe	avú
Mountain	ching	mulong	kalong	kaphung	kaphung ~
Mouth	mamun	chamun	matthá	khumar	khamor
Musquito	káng	tingkheng	tangkháng	hachang	hacháng
Name	ming	pazyun	azyun	amang	ming
Night	zyingphá	nchun	ndúlé	ngayáilé	ngayá
Oil	tháu	tháu	tháo		tháurú
Plantain	ngachang	ngoshi	mphoithai	lipú	néné
River	tuihoek	shingú	arunkai	úrui	kong
Road	lampwí	mpwi	lampí	lampí	songvú
Salt	muchi	mutai	nchi	kusam	machi
Skin	mun	paghi	taghi	ahul	ahui
Sky	tangbán	tinggem	tinggam	tangaram	kazing
Snake	maruu	kauu	sanná	rinum	pharú
Star	fnai	chagan	chaghanthai	harthí	sirvá
Stone	lung	talo	ntau	ngalung	ngalung ; ~
Sun	rimik	tingnainik	tamik	tamak	tsingmik
Tiger	takhá	chakwí	khúbui	akhubi	sangkú
Tooth	ngá	ahú	aghá	avá	há ; ~
Tree	thiákgung	singbang	akoi	asing	thingrong ; ~
Village	nam	nam	iuam	rám, khul	ramkhú
Water	tui	tadui	athui	thari	tarú
Yam	bánrá	charú	charáthai	páthai	lákupái

English.	N. Tángkhul.	C. Tángkhul.	S. Tángkhul.	Khoibú.	Maring.
Air	masú	mashia	khíráng	nonglit	marthí
Ant	lángzá	chamché	akhau	miling	phayáng
Arrow	malá	malá	the	malá	lá
Bird	atá	otá	mate	wátá	wáthá
Blood	n-ú	unsi	athu	hi	hi
Boat	malhú	malhí	rakoug	malí	lí
Bone	arúkéu	urú	arú	thurú	khurú
Buffalo	shí	shí	selú	raloi	lui
Cat	lámé	tumí	akhan	tongkan	tung
Cow	samuk	samuk	samuk	namuk	muk
Crow	khungkhá	hongkhá	awák	hathaiák	ák
Day	masútum	masung	asún	nongyáug	nunghóng
Dog	phú	wi	ú	wí	wi
Ear	akháná	okhané	nákor	kháná	nhamil
Earth	mulái	ngulái	alú	thalai	klai
Egg	háchú	atú	aitú	wáyui	wáyui
Elephant	naphtú	sakatui	súi	kasá	sái
Eye	amuchá	omit	amit	mit	mit
Father	apá	opá	pá	pá	pápa
Fire	mái	mái	mui	mai	mai
Fish	khí	saugá	ngá	thangá	hugá
Flower	pie	pie	ramen	pár	pár
Foot	ukho	okho	ake	wáng	ho
Goat	ni	mikre	makre	hingngau	klang
Hair	kosen	kosen	sam	sam	sam
Hand	akhú	khut	kuit	khut	hut
Head	aláo	okáo	alú	lú	lú
Hog	hok	hok	ok	hok	wok
Horn	akat-ú	mehí	arki	atsi	chi
Horse	sakoi	sakoi	supuk	shapuk	puk
House	shin	shin	yin	tsim	chim
Iron	marú	marí	thiar	sakwá	thir
Leaf	thíná	thíná	thingná	ná	ná
Light	she	shea	wár	wár	wár
Man	mú	mi	pá-á	thami	hmí
Monkey	nayong	nayoug	yong	hayong	yung
Moon	kacheang	kncheang	akha	tanglá	tanglá
Mother	aphú	ouá	noá	náhi	táá
Mountain	knphung	knphung	ramthing	ramthing	khluug
Mouth	ania	onia	mur	mur	mur
Musquito	hacheang	haicheang	sungsan	thangtan	thangkran
Name	ami	omin	armin	ming	ming
Night	mayá	rosá	ayan	rasá	meá
Oil	tháu	tháu	tháu	sherek	thik
Plantain	mottná	mottthai	infit	mothai	muthai
River	kong	tútháu	tú	kongpwí	tulil
Road	somphú	sombú	laiapú	lumpwí	lam
Salt	ntsú	machí	machí	miti	ti
Skia	nhú	ohoi	arhú	un	wun
Sky	kaziráng	kachiráng	arwálong	thangwán	nungthau
Sunke	phrú	phrú	marí	phurun	phul
Star	sapáchenglá	sapáchenglá	arshi	tikron	sorwá
Stone	lunggau	lung	lung	thullang	khluug
Sun	yimít	ohimit	ani	nongmit	nungmit
Tiger	sakhwú	sakwí	hamj-ú	hompwí	humwí
Tooth	nhá	ohá	alárrá	há	há
Tree	thingbáng	thingbáng	thing	hington	hingbái
Village	raháng	ram, khui	ram	yon	-yul
Water	niehú	túndú	tú	yui	yui
Yam	berhá	berhá	wirá	rá	bái

<i>English.</i>	<i>Anamese.</i>	<i>Japanese.</i>	<i>Corean.</i>
Air	hoi	djiyu	siyo
Ant	kien	ari	kayami
Arrow	ten	ya	sar
Bird	shim	tori	sai
Blood	mau	tsü	phi
Boat	ding	tenmä	syosyon
Bone	shüing	hone	spyo
Buffalo	kloungük	suigiu	murayo
Cat	meiü	neko	koi
Cow	süingrau	ushi	syo
Crow	konkwa	karasze	kamakoi
Day	ngui	hi	narir
Dog	sho	inu	kai
Ear	tái	nimi	kái
Earth	det	tsi	tati
Egg	krüing	tamango	ar
Elephant	wói	dso	khokhirl
Eye	mat	me	nün
Father	shá	tsitsi	api
Fire	lün	hi	pär
Fish	kha	sakana	koki
Flower	hou rü	hana	kot
Foot	kang-hun	asi	par
Goat	vé	hitszeji	yang
Hair	long	kaminoke	thorok
Hand	tü	te	son
Head	dá	atama	mari
Hog	héu	inoshiishi	santsey
Horn	süing	tsuo	spär
Horse	ngüa	ma	mar
House	ya	uchi	tsipka
Iron	sat	tets	tsuuir
Leaf	la	namari	nip
Light	raangsang	hikari	piyot
Man	ngoe	stoniu	suram
Monkey	wün	saru	tsainnapi
Moon	klang	ski	tarwor
Mother	me	baha	omi
Mountain	yam	yama	moismuui
Mouth	meng	kuchi	ipku
Mayquito	bang	ka	mokái
Name	ten	na	irhom
Night	dem	yoru	pamya
Oil	yan	abura	kirüm
Plantain	kongtin	obako	phatshyo
River	som	kawa	hasyu
Road	dang	mitchi	kin
Salt	moe man	shiwo	sokom
Skin	yü	kawa	katsok
Sky	tüingtien	sora	hanar
Snake	ran	kuchinawa	pañam
Star	tingto	hoshi	pyor
Stone	da	ishi	torsyok
Sun	witaiyüing	nitchirin	nar
Tiger	ongkop	tora	pom
Tooth	nanrang	ha	ni
Tree	kai	ki	namo
Village	lang	mura	suikor
Water	nük	midzu	mursyu
Yam	kwei	skunemo	ma

RESULTS OF COMPARISON,

Shewing the proportion of words in 100, which, in any two of the languages mentioned below, are found to be the same, or so nearly alike as to authorize the conclusion that they are derived from a common source.

	Bangali,	Asmese,	Khamti,	Siamese,	Aka,	Abor,	Mishmi,	Dumee,	Karen,	Singpho,	Jili,.....	Garo,...	Maupuri,	Songpu,	Kapwi,	Koreng,	Maram,	Champhu	Luhuppa,	N. Tangk	C. Tangk	S. Tangk	Khoibú,	Maring,	Anamese,	Japanese,	Corean,
Bangali,	63	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Asmese,	1	63	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Khamti,	1	1	63	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Siamese,	1	1	1	63	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Aka,	1	1	1	1	63	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Abor,	0	0	0	0	0	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mishmi,	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Dumee,	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Karen,	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Singpho,	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Jili,.....	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Garo,...	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maupuri,	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Songpu,	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1	1
Kapwi,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1	1
Koreng,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1	1
Maram,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1	1
Champhu	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1	1
Luhuppa,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1	1
N. Tangk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1	1
C. Tangk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1	1
S. Tangk	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1	1
Khoibú,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1	1
Maring,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1	1
Anamese,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1	1
Japanese,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63	1
Corean,	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	63

Request for specimens of other Languages.

The foregoing table is to be regarded only as the commencement of a series of comparisons, which it is desirable to extend to as many languages as practicable. We would therefore request persons residing in various parts of India, or in other countries, to furnish specimens of such dialects as are spoken in their respective neighbourhoods, including all the words given in the table, by which means a general comparison may be readily made. In addition to the list of words, it is desirable to obtain information on the following points:

1. Within what geographical limits the language described is spoken.
2. The estimated number of people who speak it.
3. The account they give of their own origin, and any circumstances

which, in the opinion of the writer, tend to elucidate their origin, and to establish an ancient connection between them and other races.

4. Whether the language is originally monosyllabic or polysyllabic. If the former, have any polysyllabic words crept in, and from what source?

5. Does the language possess a variety of tones? How many and what are they?

6. Is the pronunciation of the language uniform throughout the district in which it is spoken? Are the sounds of particular letters varied, in certain positions, for the sake of euphony?

7. Is it a written language? If so, whence does it derive its alphabet? Is its alphabet well adapted to express the sounds of the language, or otherwise?

8. How many vowel sounds does it contain? How many consonants?

9. What languages does it resemble in grammatical construction? Do the nouns undergo any change of form on account of case, gender, or number? If not, how are these accidents expressed?

10. Are the verbs inflected to express the various moods and tenses? Or are these determined by the use of prepositive or postpositive particles?

11. Are adjectives varied to agree with their nouns? Have they any degrees of comparison? What is the method of forming the numerals above ten? Are there any generic particles affixed to the numerals?

12. Has the language an article?

13. Are there different forms for the personal pronouns, designating the superiority or inferiority of the speaker or hearer?


14. In what order are the different parts of speech arranged in a sentence? Does the possessive case precede or follow the word by which it is governed? Is the objective governed by prepositions, or postpositions? Does the verb precede or follow the objective which it governs? Do adverbs, conjunctions, auxiliaries, and other particles precede or follow the verbs which they modify?

IV.—*Specimens of Buddhist Inscriptions, with symbols, from the west of India.* By Colonel W. H. STILES, Hon. Mem., As. Soc. &c.

The admirable and efficient use you have made in your able journal of the ancient inscriptions and ancient coins found in various parts of India, induced me to apply to withdraw all my copies of inscriptions met with in Western India from the hands of the Royal Asiatic Society with a view to offer them to you to make such use of as you might think proper. My application to the Royal Asiatic Society was met with an assurance that the inscriptions, which had been transmitted to the literary society of *Bombay* very many years ago, and which were subsequently sent by this society to the R. A. S., were to be published immediately; this assurance precluded further interference on my

part and I shall therefore not do more than transmit to you, copies of such inscriptions as I think from the associated emblems or monographs may assist to throw light upon some of the coins you have published. As preliminary to my observations you must permit me to quote a passage from your own elaborate account of the coins which appear in your journal. You say most justly and philosophically that, "It is an indisputable axiom that unstamped fragments of silver and gold of a fixed weight must have preceded the use of regular coin in those countries where civilization and commerce had induced the necessity of some convenient representation of value. The antiquarian therefore will have little hesitation in ascribing the **HIGHEST GRADE OF ANTIQUITY** in Indian numismatology to small flattened bits of silver or other metal which are occasionally discovered all over the country, either quite smooth, or bearing only a few pinch-marks on one or both sides; and generally having a corner cut off as may be conjectured for the adjustment of their weight."—Vol. iv. p. 627. If it be found that Baudha emblems or Baudha monographs exist upon such coins, we shall have the *highest grade of antiquity* in Indian numismatology associated with Buddhism. And that such is the case you have supplied numerous instances, and vol. iv. pls. 31 and 34, of the square kind, coins 26, 27, 32, 51 and 18 are denominated ancient Hindu coins, but which from their emblems or monographs, are evidently coins of Buddhist dynasties; at least they must be admitted to be such until we can prove from unquestionable ancient Hindu inscriptions that similar emblems or monographs were used by the Hindu inhabitants of India in contra-distinction to the Buddhist inhabitants. You will perceive that the monograph which characterizes the above coins is the † and a reference to my perfect Baudha inscriptions will prove that this emblem is initial or final, or both, in every inscription excepting the second. Very many of the rounded coins, which according to your dictum are comparatively more recent than the square coins, are equally characterized by the emblems.

Proceeding to another emblem common to the coins and the Buddh inscriptions, it will be seen that the initial symbol of inscription No. 6, is absolutely identical with the emblem or monograph over the back of the elephant on the coin No. 9, on the reverse of which is a bull usually denominated by Europeans, a brahmany bull; but which, as it is found in Buddhist sculpture as well as on Buddhist coins, might with equal propriety be denominated a Buddhist bull. The partially obliterated emblem on coins 5, 13, is no doubt the same as that in coin 9.

It may be a question whether or not the symbol is the original of that  found on so many other coins whether Indoscythic, Canouj, or Hindu,—or it may be, that the initial symbol of inscription No. 2, has a greater claim, with its four points. I do not perceive any symbol on the coins exactly corresponding to the initial emblem of inscription No. 3, but the male figure in coin 16, plate 38, vol. iv., is pointing downwards to a form not very far removed from it. One of the emblems observed on the Canouj series of coins is a pole, on the top of which is a compound object not referable to any known form; an erect male figure, called by you the sacrificing rāja, with a glory round his head, or the crescent behind his shoulders, looks towards this emblem: on the reverse is a female either seated on a stool, on a bed, or on a couchant lion. I beg of you to bear this remarkable emblem on the one side, and the female seated on a lion on the other side, particularly in mind, for they will assist to connect the Canouj series of coins with a Buddhist dynasty. In illustration of the emblem I transmit a sketch of the principal figure of Buddh in alto relievo in the celebrated cave temple of *Karleh*. You will perceive that Buddh is seated on a lotus flower, supported by the identical emblem met with on the coins, vide plate 38, coins 16, 17; plate 39, coins 18, 19, 20, et seq. That the emblem is sacred is evident from its supporting Buddh; and the figures holding up the pole are no sublunary personages, for their heads are shrouded by the seven-headed snake which shrouds Buddh himself in some of the sculptures at *Ellora*. In coin 24 G. pl. 39, vol. iv. the emblem is placed between a male and female (probably the rāja and his wife of the coins) both of whom are looking up to it; and the female appears to be making an offering. You state this emblem to be a standard having a bird at the top, somewhat resembling the Roman eagle; and you read the name of the rāja to be KUMARA GUPTA. A relook at coin 20, pl. 39, vol. iv., in which the outline of the emblem appears to be quite perfect will probably induce you to compare it again with other coins, to ascertain what changes of form the emblem undergoes. In the sketch I have sent you will observe the association of Buddh with lions, (odd as they look) antilopes and snakes.

I now come to a remarkable coincidence. On coin 25, pl. 39, vol. iv. a female is represented seated on a couchant or reposing lion. This coin you call the *Conolly* coin, from that gentleman's discovery of it, and the legend is read *Srī SINHA VIKRAMA*. I beg of you to take up the 3rd volume of the Transactions of the Literary Society of *Bombay*, and turn to my account of the caves of *Ellora* and you will there find a sketch absolutely identical with the figure on the coin. We have

the exact position of the lion (in my account inadvertently called tiger ; but it is a *maned* lion), the exact position of the right leg of the female ; the same aspect of the figure, the glory round the head ; and the same ornaments on the arms above the elbow, and in the same female figure on other coins we observe the same triple necklace. My sketch represents an alto-relievo figure cut out of the rock in the *Buddh* cave temple at *Ellora*, now most absurdly denominated by the Hindus *Jagannāth Subha*, and the figure herself with equal absurdity is called *Bhagésrí Bhowaní*, but in *Indra Subbah*, she is called *Inderaní*, and is sculptured on the walls of the hall. A tree is sculptured on the wall behind the female figures, in which are roosting peafowls. I mention this, because, from the female in coins 28 and 30 being associated with peafowls, she is considered to be the wife of *Kartika*. The originals of my sketch are as large as life, and *Inderaní* is sculptured on the terminal wall of a long vestibule to the crypt or sacred place where *Buddh* is sculptured : the opposite terminal wall of the vestibule has corresponding figures as large as life (with the exception of the elephant) of a man seated on a couchant elephant, a tree is behind the figures and on the branches peafowls are seated, and the man is now called *Indra*. As there are not any sacred symbols connected with these figures, but as they were evidently not secondary objects with the sculptors or excavators of the temple, not less from their position than from their execution, I have for some years been accustomed to consider them representations of the prince and his consort, by whom the cave was executed ; and in this opinion I was confirmed by similar figures being met with under similar circumstances in two other *Buddh* caves ; there being only some slight difference in the position of the female upon the lion, such as is seen in coin 27, and in one instance the lion is by the side of the female.

If therefore these coincidences justify the belief that the female figure on the coin and the female figure in the *Baudha* caves of *Ellora* be the same, we come to the conclusion that the caves in which the figures are found were excavated by a Buddhist prince, named **VIKRAMA MAHENDRA GUPTA** ; and the form of the Devanāgrī letters upon the coin will give a period of 2000 to 2500 years for the date of the excavation. Of course the caves were excavated by different princes, for such astonishing works of art could only have been perfected in many generations.

It would appear that upon the ancient coins, whether of the Canouj series, from *Behat*, *Saurashtra*, *Jaunpoor*, or Western India, on some or all of them are found emblems, symbols, monograms, figures of men and

animals, trees, peafowls, &c.—all of which are to be met with sculptured in Baudha cave temples ; and the coins are impressed with an antique form of the Devanāgrī which is only met with in Buddhist inscriptions in Buddhist works of art. Now until we find the same symbols, monographs, figures, and the same antique form of the Sanskrit character in Hindu works of art ; (and there is nothing of the kind whatever in the numerous cave temples in Western India dedicated to ŚHĒVUH (ŚIVA) particularly there is not any inscription in the antique form of the Devanāgrī,) we may legitimately infer that Buddhists are the authors in cases where these symbols are found, and that Hindus are not the authors. Moreover, the use of the antique form of the Devanāgarī indicates a priority in the use of it, over those who appear to have used a modified form of it.

I beg of you to make any use you please of this letter ; for I have not any objection to my opinions being subjected to the test of public criticism. Truth is my object and I am quite satisfied to be set right in case I am wrong.

Note on Col. SYKES' Inscriptions, by JAS. PRINSEP, Sec. As. Soc., &c.

Colonel SYKES pays us no small compliment in wishing to transfer back again to India for elucidation the numerous inscriptions he so long since collected in the West of India. This is indeed reversing the order of things !—while we are sending to Europe all those great men eminent for their knowledge of the ancient tongues of India, and discouraging (if not persecuting) the study of these tongues by the natives themselves ;—while the public declaration of a late president (Sir CHARLES GREY) still rings in our ear, that the subject of Indian literature and antiquity was now exhausted, and that we must seek other matter of physical research to occupy the attention of the members of the Asiatic Society, we are awakened and encouraged to a fresh train of antiquarian investigation by an appeal from our retired comrades, who had carried away with them stores of precious materials to lie long neglected, or to excite fruitless curiosity in a clime uncongenial to their elucidation.

More than one great question is certainly involved in the solution of the cave inscriptions of western India. To whom is to be attributed their construction ? From what period have they existed ?—In what language and character are the records sculptured ?—Unknown to Colonel SYKES, the whole of these questions have been already solved as regards the pillar monuments on this side of India :—They are of the third or fourth century anterior to our era : they are of Buddhist foundation ;

and the language is not Sanskrit, but a link between that grammatical idiom and the Páli of the Buddhist scriptures. The alphabet appears to be the very prototype of all the *Devanágari* and *Dakshini* alphabets : and nothing in the pure Sanskrit tongue has yet been discovered preserved in this character : indeed it would be impossible that it should ; because, still more than the Páli, the alphabet is deficient in many letters absolutely necessary to Sanskrit syntax.

Further, of the cave inscriptions on this part of India, we have already published one from *Gaya* in the selfsame alphabet and language, of the age of rája *DASA RATHA* (the II.) In the present number we publish another equally important evidence from *Cuttack*, proving that the caves in the *Khandgiri* hill were repaired and appropriated, if not excavated, in the time of *Asura* rája a Buddhist sovereign of Calinga. From the west of India we have hitherto only had one specimen (that of Dr. *Stevenson* from *Karli*) to deal with, and this we have with reason suspected of being also *Páli*, though the character has evidently undergone the changes of a century or two.

Whatever may be our desire to penetrate further into the secret, we still by no means regret that Col. *Sykes* has not sent the whole of his collection to gratify our curiosity. Impressed with a conviction that no written copy is to be trusted implicitly we should have either hesitated to look at them at all, or perhaps should have wasted hours of labour in vain on them ; while we know that our zealous fellow-labourers in *Bombay* are meantime adopting the best means of securing authentic facsimiles of these very inscriptions, and are even now engaged in examining their contents. Nevertheless these half-dozen brief specimens from *Jooneer*, selected as containing symbols identical with those on the various Buddhist groups of coins, have, invited attention in spite of all our resolutions ! and though future comparisons may change and correct many letters in our reading, we cannot refrain from publishing the results, strikingly confirmatory as they are of the fact that these Buddhist cave inscriptions are also in the vernacular of the day, all equally simple and intelligible—now that the key has been discovered. This key is of course no other than the one recovered through the *Bhilsa* *dánams* ; and it is a singular fact that the principal deviation in the *Sainhadri* cave alphabet, from what may be considered as the original type, (namely, that of the letter *d*,) has been traced and verified through the recurrence, in many of the short inscriptions, of the somewhat similar expression *daya dhama*, (Sanskrit *dayá-dharma*.) The principal acts here are of ‘compassion and piety, as those were of ‘charity ;’ not that the latter expression does not

also occur in some of the present examples : and particularly in fig. 1 of the accompanying plate, wherein Colonel SYKES happily confirms the correction I ventured to introduce into the Rev. Dr. STEVENSON'S copy of the same line (see page 468 of the present volume). Strange to say there are many other discrepancies of equal magnitude in the two copies of this simple document : Col. SYKES' line reading :

Saharavisabhoti putasa (a) gimita ukasa sihathabhodanam.

The change from *pihathato dāra* to *sihathabho dānam*, immediately opens our eyes to the subject of the record, *sihathabho* (or *sihathambha*) being the regular Pāli orthography of सिंह स्तम्भ : *Sinha stambhas*, the lion pillar ; and Col. SYKES informs us that the inscription is engraven "on the obelisk or pillar in front of the Kārli cave." The obvious translation then is,

"This lion pillar is the gift of AGIMITRA UKAS the son of SAHA RAVISABHOTI."

In fig. 2 a perfect inscription from the doorway of the *Sainhadri* caves north of *Jooneer (Júnira)*, we may remark the commencement of a departure from the original form in some of the letters used : thus the *t* or λ is changed to h , a common form also in the *Girnar* inscriptions, and evidently the link between the original form and the h of the *Mahamalaipura* inscriptions, and of the various southern alphabets : it may be also seen in inscription 3 of the present plate. This letter would be taken for an *n* by readers on our side of India ; and this is perhaps one of the best possible proofs of the authenticity of the primitive form, whence by distinct ramifications in opposite sides of the peninsula the same derivative has come to denote quite a different original ! The *n*, of our Samudra Gupta and more modern alphabets is derived from \perp ; this when written, required the pen to be carried below forming a loop thus \perp ; which was gradually carried downward in hook and hook , and ended in the modern n . But I must not attempt on this occasion to analyze individual letters, or I shall be carried away into an endless digression. Correcting the second anomalous letter conjecturally, the line will run thus :—

Dhammika seniya sata gabham uḍhi cha daya dhamam.

which corresponds precisely with the Sanskrit :

धार्मिकसेनीय सतगर्भ उड्डीच दयाधर्म.

"The hundred caves and the tank of DHARMIKA SENI—his act of piety, and compassion."

I must be allowed to remark en passant that the letter *n* has here changed its form to \perp , which appears to be the original form of the

𑀘, 𑀙, 𑀚, 𑀛, 𑀜 and 𑀝, of successive alphabets, and may explain the circumstance of that class of *n* alone being known in the written Prākṛit of the Hindu drama, and of the sacred literature of the Jains. For the word *uḍhi* see observations on No. 5.

The symbol on this inscription, Col. SYKES identifies with that on coins 16, 17, 18, 26, 27, 32 and 51 of plate 34, vol. v.

Inscription 3 may be transcribed in Roman letters thus :

Virasenakasa gahalatila maghasa

Dhama nigamasa dayadhama, chetiya-ghara,

Niyuta sama loka hita sukhāya.

In Sanskrit this sentence may be rendered with exact conformity :

वीरसेनकस्य पद्मवर्त्मसमष्टस्य धर्मेनियुतस्य चैत्यगृहं नियुक्तं समं लोकं हितं
सुखाय

"The compassionate and pious act of VIRA SENAKA, the *gahalatila magha*, the abode of righteousness,—for the pleasure and advantage of the virtuous attendants of the chaitya temple."

This inscription is stated by Col. SYKES to be "on a Buddhist cave temple in which there is a large isolated *dehgopa*, under the hill fort of *Seunere* or *Jooner*." The expression *chetiya ghar* of course alludes to this interior structure: it is exactly the modern vernacular name, and it introduces us with certainty to a new letter, the *gh*, which has been hitherto a desideratum; and which was of doubtful existence in the primitive alphabet. Some modification is also perceptible in the *kh* of the word *sukhāya*, of the reading of which however there can be no reasonable doubt.

The symbol at the head of this inscription agrees precisely with that of many of our golden Indo-Scythic coins.

The name *gahalatila magha* reminds us of a tribe of Rājputs, the *Gehlotes*, or *Grahlotes* who founded the Gohila dynasty of *Mewār*, after the destruction of the Balabhis of *Saurashtra*. *Magha* is the name of one of the *dwipas* or divisions of the universe: It also applies to the *Magas* of the Arracan country, Buddhists who claim to have given their name to the *Magadha* province whence they migrated eastward: but this is doubtful.

Figure 4 is headed, "Perfect inscription over the doorway of the large pillared cave temple within the vestibule, *Sainhadri* caves."

Some little ambiguity remains as to the third letter which may be either *a* or *s*; in the latter case the sense will only vary so far as to introduce the name of the *mother* as well as of the father of the benefactor—*Kālī sutasya*, 'born of KALĪ'—but as the same letter occurs in the next inscription without change, I think it must be an *a*

rather than an *s*, although we have thus a collision between two vowels.

Kali átasa hærapika putasa sulísadatasa thakapurisasa chetiya ghara niyuta dayadhama.

In Sanskrit :

कल्यार्जस्य वैरस्य पुत्रस्य सुलेख्यस्य उक्तः कैरस्य चैत्यम् च निवृत्त दत्त धर्मा

"The pious act of SULISADATTA, lord of the city of *Thaka*, the son of KALI' A'TA (or KALYARTA) the gold merchant, for the attendants on the chaitya-temple."

The name of the rich person at whose expense the cave was apparently dug or ornamented, may be translated 'given by the sun'—equivalent to *Apollodotus* of the Greeks; it may also be read *Súlisa datta* (given of SIVA); both are somewhat at variance with a *Bauddha* profession. The town over which he ruled looks very like *Thákurpura*.

No. 5, of the same plate, is 'enclosed in a panel, over the western cistern near the large reservoir in the *Sainhadra* caves.'

Kali dtekasa kuñira putasa sudhava

Kánasa saghakasa uñhi dayadhama.

Here the four opening letters are the same as in the last example, but they are followed by a *k*, and the rest of the name is different. The doubtful word in the second line is evidently the same as one in the second inscription, where from following *satagabham* with a conjunctive '*cha*' it seemed to denote some similar object of art. From the position of the present inscription, that object could be no other than a reservoir for water, and from analogy to the primitive alphabet the initial letter should be the vowel *l* or *u*. In WILSON'S dictionary I accordingly found the word उद्धः : *uddhras*, water, whence would naturally be formed उद्धी *uddhrí*, or in Páli, *uddhí*, a tank, or water reservoir. Again the letter *t* of *putasa* more resembled a *bh*, which if so would make the reading *kuñira pubhasa* (Sanskrit कुण्डोत्पन्नस्य *kuñira prabhasya* or *prabhavasya*, enlightening or born in a cottage)—and the whole sentence :

"This tank is the pious work of KALI' ATAKA the humbly born, the honest acquirer of wealth, the deceased (gone to heaven, *swargágasya* ?)"

The modification of the letter *dh* should be particularly noted as it might easily be taken for a *v*, but for the known word *dhama*.

No. 6. This is one of the most curious of the series because of the exact accord of the initial symbol with the monogram on a large series of the Indo-Scythic coins, commencing with the reverse of the celebrated *Mokadphises* coin. There can be little doubt that these signs, placed at the head of every written document, and stamp on the field of every die are, like the *aum* of the brahmins, the cross of

the Christians, or the triangle of the masonic brethren, connected with the religion of the parties. Twenty-four such signs are still in use among the Jains, whose books or traditions may some day instruct us in the allegories they are intended to convey. The present panelled inscription is 'on the most western end of the rock near the chambers of the *Sainhdātri* caves.' It runs in the usual strain :

*Sāmaḍapasakasa putasa,
Sivakukhisa daya dhama dānam,
Kapdvibhasa yase niyutakam.*

सामउपसकपुषस सिवकुषिकस (?) दयाधर्मदानं कपाविभस यसे नियुक्तं

"The pious and charitable endowment of SIVA KUKHI (?) the son of SA'MA-RAPASAKA (?) redounding to the glory of this most compassionate person."

implying doubtless that the chambers had been constructed by the party, for the accommodation of the priests or ascetics who resided on the spot.

Can we then venture to affirm on the strength of these very brief and detached announcements that we have solved the great question of the origin of the cave temples of western India, those stupendous works of art which it is calculated must have occupied centuries of labour and mines of wealth to excavate? The obvious answer is;—if these inscriptions occupy, as they seem to do, prominent and designed places in the works they allude to, they can hardly be imagined to record any thing less than the original construction: or when the excavations were of natural formation, at least their embellishment and architectural sculpture.

In this case we may at once pronounce, from the alphabetic evidence, that the caves were thus constructed or embellished a century or two prior to the christian era, when Buddhism flourished in the height of its glory from *Cashmír* to *Ceylon*.

It is certainly an extraordinary circumstance that among all these inscriptions, the title of *rāja* should never occur, and that such great undertakings should appear to have proceeded from private zeal, from obscure individuals neither connected with the court nor with the priesthood; for neither any where do we discover the familiar titles of *Sramana*, *Bhikṣu*, *Mahāmātī* nor *Arahata* in the present inscriptions.

The above are but a few specimens selected from a mass in the owner's possession, and unimportant compared with those on which we have reason to believe our friends in *Bombay* are now engaged. From their labours must we impatiently expect the solution to Col. SYKES' question now we are told under re-agitation in England—'whether the

buddhists or the brahmans may claim precedence in the history of Indian civilization and literature?' We have already expressed an opinion on this discussion, supported by the strong argument that the language of all our lately disclosed documents is a mere scion of the pure Sanskrit stock, not quite so distant from its parent as the *Pāli*, or the Jaina *Prākṛit*, but still widely at variance with the purity and perfection of the sacred language of the *Vedas*.

Nevertheless opponents may argue,—where are any Sanskrit sculptured documents or inscriptions of equal antiquity?—Look at the Sanskrit inscriptions of the *Saiva* sculptures at *Mahamalaipura* so ably deciphered by Mr. BABINGTON*: they are in a character which can be proved to be a regular and even distant descendant of the *lāt* character. Again they may argue, does not the word *Sanskrit* imply that the existing language was reformed, dressed and reduced to grammatical restraint, at some period?—this was attended with the introduction of several new letters which are not to be found in the early primitive alphabet, nor even in the early offsets from it, the square *Pāli*, and the old *Tamil*:—whereas we can trace their gradual incorporation in these western link inscriptions, and we find them fully developed in the well preserved copper-plate grants of the third century so happily coming to aid our studies from *Gujerāt*. “Much may be said on both sides,”—but it is most prudent to say nothing at all as yet;—to imitate the best schools of geology, and collect materials without meddling with theories.

We have said nothing of the last of Colonel SYKES's inscriptions,—that over a large figure of *Buddha* in the cave temple of *Kārli*, 35 miles W. N. W. of *Poona*, because it is evidently imperfect and mutilated. It would be easy to pick out detached passages capable of interpretation, as the following towards the end of the first line
parāgatu ime sava thala (sthalla) vasata lokasa vāthavaya (vastavāya) :
 quasi, (for the accommodation of foreign pilgrims from all places.) In the following lines frequently occurs the expression *gāmaka rajake*,
 ग्रामकराजकः ‘devotees belonging to the town.’ The two expressions point to some endowment for these two classes of devotees. Colonel SYKES in a note describes the figure of *Buddha* to be ‘seated on a lotus flower, supported on a remarkable emblem, held up by two figures whose heads are shrouded by seven-headed snakes. The supposed curly hair of the figures of *Buddha* is here evidently a cap or head-dress. Like the generality of the figures of *Buddha* in the cave temples of Western India, it is associated with lions, ante-

* Transactions of the Royal Asiatic Society, vol. II.

lopes and snakes. The inscription occupies the exact situation here represented.'

The allegory of ancient mythology is a distinct study, a language more difficult to read than any of our 'unknown tongues' when the superstitions are once swept away from practice and memory. I cannot yet attempt any explanation of the symbols common to the caves and the coins. But Buddhism still flourishes in neighbouring countries, and thither we must refer for elucidation of these and the thousand other mysteries and anecdotes of the saint's history pictured in stone and in fresco on the deserted caves and temples of his once thriving followers in India.

V.—*Further notes on the inscriptions on the columns at Delhi, Allahabad, Betiah, &c. By the Hon'ble GEORGE TURNOUR, Esq. of the Ceylon Civil Service*.*

I have read with great interest, in the *Asiatic Journal* of July last, your application of your own invaluable discovery of the LAT alphabet, to the celebrated inscriptions on FERÖZ's column, at Delhi.

When we consider that these inscriptions were recorded upwards of two thousand years ago, and that the several columns on which they are engraven have been exposed to atmospheric influences for the whole of that period, apparently wholly neglected; when we consider also, that almost all the inflections of the language in which these inscriptions are composed, occur in the ultimate and penultimate syllables, and that these inflections are chiefly formed by minute vowel symbols, or a small *anuswara* dot; and when we further find that the *Pāli* orthography of that period, as shewn by these inscriptions was very imperfectly defined—using single for double, and promiscuously, aspirated and unaspirated consonants; and also, without discrimination, as to the class each belonged, the four descriptions of *n*—the surprise which every reasonable investigator of this subject must feel will be occasioned rather by the extent of the agreement than of the disagreement between our respective readings of these ancient records.

Another very effective cause has, also, been in operation to produce a difference in our readings. You have analysed these inscriptions through a *Brahmanized Sanskrit* medium, while I have adopted a *Buddhis-*

* We consider it a duty to insert this paper, just received, in the same volume with our version of the inscription, adding a note or two in defence of the latter where we consider it still capable of holding its ground against such superior odds!—ED.

tical Pāli medium. With all my unfeigned predisposition to defer to your practised judgment and established reputation in oriental research, it would be uncandid in me if I did not avow, that I retain the opinion that the medium of analysis employed by me has been (imperfect as that analysis is) the more appropriate and legitimate one.

The thorough investigation of this subject is of such paramount importance and deep interest, and as (if I have rightly read the concluding sentence of "the fifth inscription round the shaft of FERROZ's pillar," which appears for the first time in the July journal,) we have yet *five* more similar columns* to discover in India, I venture to suggest that you should publish my translation also, together with the text in the ancient character, transposed *literatim* from my romanized version†. Future examiners of these monuments of antiquity will thus have the two versions to collate with the originals, and be able to decide which of the two admits of the closest approximation to the text.

In the present note I shall confine myself to a critical examination of the first sentence only of the northern inscription, which will serve to show how rigidly I have designed to adhere to the rules of the *Pāli* grammar in my translation of these inscriptions; and then proceed to explain the historical authority I have recently discovered for identifying *PIYADASI*, the recorder of these inscriptions, with *DHAMMAŚÓKO*, the supreme monarch of India, the convert to, and great patron of, Buddhism, in the fourth century before our era.

The first sentence of the northern inscription, after the name of the recorder and the specification of the year of his reign, I read thus:

Hidatapālītē dūsaṭṭipādāyē, ananta agāyā dhanmakāmatāyā, agāya parikkhāyā, agāyā sāsandāyā, agēna bhayēna, agēna usāhēna; ēsūchakho mana anusathiyā.

Although the orthography as well as syntax, of your reading, viz. *hidatapālītē dūsan*, and which you construe "the faults that have been cherished in my heart," are both defective, a slight and admissible alteration into "*hadayapālītē dōsē*" would remove those objections, if other difficulties did not present themselves, which will be presently explained, and which, I fear, are insuperable.

The substantive "*ṭṭipādāyē*," however, which you convert into a verb, does not, I am confident, in the *Pāli* language, admit of the rendering "I acknowledge

* We know of five, therefore three remain—the Bhittri may be a fragment of one; that at *Bakrabad*, and one near *Ghazeepore* are without inscriptions.—ED.

† To this we must demur: we have examined the greater part from perfect facsimiles, and cannot therefore consent to publish a version which we know to deviate materially from the original text.—ED.

‡ The objection to consider *ṭṭipādāyē* as a verb does not seem very consistent with the three examples given, all of which are VERBS—*ṭṭipajjāmāti* (the double *jj* of which represents the Sanskrit *dy* not *d*) *S. pratipadyēma iti* or in *ātmani pada ūmahe*:—and twice, *ṭṭipajjitubanti* (*S. Pratipadyatavyam iti*). *Paḍa* is certainly

and confess" in the sense of *renunciation*. This word is derived from the root "*pada*" "to proceed in, as in a journey;" and with the intensive prefix "*paṭi*" invariably signifies "*steadfast observance or adherence*." With the prefix of collective signification "*saṃ*" the verb signifies "to acquire" or "to earn." I gave an instance in the July journal (p. 523), as the last words uttered by BUDDHO on his deathbed.

"*Handadānē, bhikkhuvē, amantiyāmi vō : wayadhammā sankhāra, appamāddēna sampāddētha.*" "Now, O Bhikkhus! I am about to conjure you (for the last time) : perishable things are transitory ; without procrastination earn (*nibbāna*)."

With the intensive prefix '*paṭi*,' the verb is to be found very frequently in the Buddhistical scriptures. The following example is also taken from the *Pari-nibbāna sūta* in the *Dighanikāyo*, containing the discourses of BUDDHO delivered while reclining on his deathbed, under the *sal* trees at *Kusindrā*. The interrogator A'NANDO was his first cousin, and favorite disciple.

Kathan Mayan, Bhantē, Mātugāmē paṭipajjāmāti ? Adassan, Anandāti, Das-sanē, Bhagavā, kothan paṭipajjītabbanti ? Anālapo, Anandati, Alopantēra, Bhantē kathan paṭipajjītabbanti ? Sati Ananda Upaṭṭhā pētābbāti.* "Lord, how should we comfort ourselves in our intercourse with the fair sex ? A'NANDO ! do not look at them. BHAGAWA ! having looked at them, what course should be pursued then ? A'NANDO ! abstain from entering into conversation with them ? In the course of (religious) communion (with them), Lord, what line of conduct ought to be observed ? Under those circumstances, A'NANDO ! thou shouldst keep thyself guardedly composed."

It is evident, therefore, that the substantive "*paṭipādayē*" signifies "*observance and adherence*" and cannot be admitted to bear any signification which implies "*renunciation*."

It is almost immaterial whether the next word be the adjective "*annata*" or the adjective "*ananta*"—I prefer the latter. But "*aghāyā*," cannot possibly be the substantive "*aghaṇ*" "*sin*," in the accusative case plural†. The absence

the root of all ; which with the prefix *paṭi* (*S. prati*) takes the neuter sense of 'to follow after (or observe) ;' while by lengthening the *a*, *pāda*, it has the active or causal sense of to make observance, to declare, ('*paḍyate*, he goes, *pādayati* or *pādayate*, he makes to go,) the only alteration I bespoke was *pālatē* to *pālatam*, to agree with *dosam*—but as the *anuswara* is very doubtful in the *Allahabad* copy, I incline to read (Sanskriticē *hīdayatapālataḥ dosahpaṭipādayē*, 'I declare (what was) the sin cherished in my heart'—with a view of course to renunciation. The substitution of *u* for *o* has many examples :—but I never pretended that the reading of this passage was satisfactory.—ED.

* By permutation *d* becomes *jj*, (rather *dy*.—ED.)

† My critic has here been misled by my looseness of translation—had he followed my Sanskrit, he would have seen that *aghāyā* was never intended as an accusative plural of *aghaṇ* : I must parse and construe the whole, premising that the texts differ in regard to the final *a* of the 2nd, 3rd, and 4th words, which in some copies of the *Delhi* inscription are long, while on the *Allahabad* facsimile they are all short. In the former case (the one I previously adopted) the reading is (Sanskriticē.)

of the aspirate would not be a serious objection, but "*agha*"* is a neuter noun of the 12th declension. The accusative plural would be "*agāni* or *agē*" and not "*aghyā*," which I read "*agāya*" the dative singular. In this sentence, this word occurs five times, varying in its inflections and gender to agree with the substantive with which it is connected in each instance; proving it therefore to be an adjective, and, I think, "*agga*" "precious," which is here spelt with a single *g* in conformity with the principle on which all double consonants are represented by single ones in these inscriptions. "*Dhanmakāmatāya*" is a *Sa-māsa* contraction of "*dhammassa kāmatāya*," and signifies "out of devotion to *dhanmo*" "*kāmā*" being a feminine noun of the seventh declension makes "*kāmatāya*" in the instrumental case, but "*agāya-parikāya agāya susūsāya*," again though terminating in the same manner as *kāmatāya*, are in the dative case as *sasūsāya* (which I read *Sūsānāya*) is a neuter noun of the *tenth* (?) declension; *bhayēna* and *utsāhēna* being, the one a neuter of the twelfth and the other a masculine noun of the first declension, both make their instrumental case in "*ena*." Without a precise knowledge of the *Pāli* grammar, it is impossible to define when a case is *dative* and when *instrumental*. "*Esachakko mama anusathiyā*," you translate, I find, "by these may my eyes be strengthened and confirmed (in rectitude)." The participial verb "*anusathiyā*," could not, I imagine, be made to bear in *Pāli* the signification you give it. The preposition "*anu*" signifies "following," "continuance," "in due order," when in composition with the root "*sara*" "to remember" (from which *sathiyā* is derived), the compound term always means "to bear in remembrance" or "perpetuate the remembrance of." If there was any thing to be gained by preserving the "eyes" we might certainly

adj. fem. s. 5. subs. fem. s. 5. sub. nt. s. 4 sub. fem s. 5. ditto ditto,
Anyata-aghāyā dharmakāmatāyā, aghāya, parikshāyā, aghāya sususāyā
 3rd case sub. s. 3 sub. s. 3 pro. 1 sub. s. 1 pro. 6 verb pot. s. 3.
aghena bhayena, aghena utsāhena, esa— chakshuh, mama anustheyā
 "from the all-else-sinful religion-desire, from examination to sin, from desire to listen to sin (sc. to hear it preached of) by sin-fear, by sin-enormity,—thus may the eye of me be confirmed."

In this translation I have preserved every case as in the Sanskrit, and I think it will be found that the same meaning is expressed in my first translation.

If the short *a* be preferred, the 5th case, *kāmatāyā* and *parikshāyā*, both feminine substantives must be changed to the 3rd, Sans. *kāmatāyai* and *parikshāyai* (in *Pāli*, *kāmatāya* and *parikhāya*)—and the sense will be only changed to "by the all-else-sinful desire of religion,—by the scrutiny into the nature of sin, &c. That *kāmatā* (not *kāmā*) is the feminine noun employed (formed like *devatā* from *deva*) is certain; because the nominative case is afterwards introduced '*dharma-prekshā, dharma kāmatā cha*, &c. Mr. TURNOUR converts these into plural personal nouns, "the observers of dharma, the delights in dharma"—but such an interpretation is both inconsistent with the singular verb (*varddhisati*), and with the expression *suve suve* (*svayam svayam*) 'each of itself'—I therefore see no reason to give up any part of my interpretation of the opening sentence of the inscription.—ED.

* *Agha* is said to be sometimes masculine, *agho* which makes *aghe* in the accusative plural.—ED.

with a trifling variation, read the passage "*esá*" *chakká mama anusathiyá*," *hontu* being understood,—“may my eyes perpetuate the remembrance of these (*dhanmá*).” But I confess I prefer the reading of this passage as it appears in the inscription—“*Esáchakko mama anusathiyá*,”—the verb “*hessati*” being understood,—and “*esá*” agreeing with “*Dhanmalipi*.” “This (inscription on *Dhanmo*), moreover, will serve to perpetuate the remembrance of me.” This rendering conveys a nobler sentiment, aspiring to more permanent fame, and is in close^r conformity also with the spirit of the last sentence in the fifth inscription.

I have still to dispose of the initial words “*Hidatapálité dusan paṭipádayé*.” I acknowledge that I was at first entirely baffled by them. When I had completed the translation of all the four inscriptions, save these three words, I found that they were the edicts of an Indian monarch, a zealot in Buddhism? and from these columns being scattered over widely separated kingdoms of India, it appeared equally certain to me that a *Rájádhirája* of India alone could be the author of them. As far as I was aware, two *supreme* monarchs alone of India had become converts to Buddhism, since the advent of *SAKYA*. *DHANMA'SO'KO* in the fourth century before Christ; and *PA'NDU* at the end of the third century of our era. I could hit upon no circumstance connected with the former ruler which availed me in interpreting these words. I then took up the *Dhātā-dātumanso*, the history of the tooth relic, the only work, I believe, in *Ceylon*, which treats of *PA'NDU*. I there found, not only that his conversion had been brought about in consequence of the transfer of the tooth relic from *Dantapura* in the Northern Circars, then called *Kálinga*, to his capital *Pāṭilipura* the modern *Palma*; but also met with several passages expressive of *PA'NDU*'s sentiments strictly analogous with those contained in these inscriptions. This discovery, at the moment, entirely satisfied me, that these three hitherto undecipherable words should be read *hi* Dantapuratō dusanan upādayé*: the *hi* being an expletive of the preceding word, and the other words signifying “from *Dantapura* I have obtained the tooth relic.”

Under this impression my former paper on these inscriptions was drawn up. My having subsequently ascertained that *PIYADASI* is *DHANMA'SO'KO* does not necessarily vitiate this reading; for the tooth relic was at *Dantapura* during his reign also; and there is no reason why *DHANMA'SOKO* likewise should not have paid it the reverential honor of transferring it to his capital. But since I have read your translation, I have made out another solution of these words, furnishing the signification you adopt, without incurring the apparent objections noticed above. The sentence written in *extenso*, divested of permutation of letters, and *samāsa* contraction might be read; † *Hin ataná pálité dūsapaṭipádayé*. “I have renounced the impious courses cherished by myself.” “*Hin*” is derived from the root *há* “to renounce,” and is the *Varaua* form of the *ajjāṭani* tense. By the 35th rule of *CLOUGH*'s grammar, p. 13, when *n* precedes a vowel it is frequently suppressed, and *m* or *d* substituted in its place, as for “*āwan assa*” is written “*ēwamassa*” for “*ētan awócha*,” “*ētaḍawócha*.” By this rule, therefore, “*Hin ataná*” would become “*Hidataná*.” Again by the “*Tapuriso*” (*Talpuru-*

* The alterations requisite to admit of that reading are trifling, and chiefly symbolic, in the ancient alphabet.

† This verb *Hin* is most frequently found in the participial form “*hiṭwá*.”

śya) rule (No. 19, p. 79) "*atanāpālīte*" would be contracted into "*atāpālīte*." The reading in *extenso* then becomes contracted into "*Hidatāpālīte*." "*Dosa*" from "*du*" signifies "impure or impious" and "*patipadaye*," as already explained are "observances or actions in life." My reading therefore of the entire sentence is now "I have renounced the impious observances cherished by myself—out of innumerable and inestimable motives of devotion to *Dhanmo*, and out of reverential awe and devout zeal for the precious religion which confers inestimable protection. This (inscription on *Dhanmo*), moreover, will serve to perpetuate the remembrance of me."

I proceed now to give my authority for pronouncing *PIYADASI* to be *DHANMĀSO'KO*.

From a very early period, extending back certainly to 800 years, frequent religious missions have been mutually sent to each other's courts, by the monarchs of *Ceylon* and *Siam*, on which occasions an exchange of the *Pāli* literature extant in either country appears to have taken place. In the several *Solān* and *Pāndian* conquests of this island, the literary annals of *Ceylon* were extensively and intentionally destroyed. The savage *RAJASINGHA* in particular, who reigned between A. D. 1581 and 1592, and became a convert from the Buddhistical to the Brahmanical faith, industriously sought out every Buddhistical work he could find, and "delighted in burning them in heaps as high as a cocoanut tree." These losses were in great measure repaired by the embassy to Siam of *WILBAGADERE MUDIYANSE*, in the reign of *KIRTISRI RAJASINGHA* in A. D. 1753, when he brought back Burmese versions of most of the *Pāli* sacred books, a list of which is now lodged in the *Daladā* temple in *Kandy*.

The last mission of this character, undertaken however without any royal or official authority, was conducted by the chief priest of the *Challia* or cinnamon caste of the maritime provinces, then called *KAPAGAMA théro*. He returned in 1812 with a valuable library, comprising also some historical and philological works. Some time after his return, under the instructions of the late Archdeacon of *Ceylon*, the Honorable Doctor *TWISLETON*, and of the late Rev. G. *BISSET*, then senior colonial chaplain, *KAPAGAMA* became a Convert to christianity, and at his baptism assumed the name of *GEORGE NADORIS DE SILVA*, and he is now a modliar or chief of the cinnamon department at *Colombo*. He resigned his library to his senior pupil, who is the present chief priest of the *Challias*, and these books are chiefly kept at the wihare at *Daddā* near *Galle*. This conversion appears to have produced no estrangement or diminution of regard between the parties. It is from *GEORGE NADORIS*, modliar, that I received the Burmese version of the *Tikā* of the *Mahāwanso*, which enabled me to rec-

tify extensive imperfections in the copy previously obtained from the ancient temple at *Mulgirigalla*, near *Tangalle*.

Some time ago the modliar suggested to me that I was wrong in supposing the *Maháwanso* and the *Dípawanso* to be the same work, as he thought he had brought the *Dípawanso* himself from Burmah. I was sceptical. In my last visit, however, to *Colombo*, he produced the book, with an air of triumph. His triumph could not exceed my delight when I found the work commenced with these lines quoted by the author of the *Maháwanso** as taken from the *Maháwanso* (another name for *Dípawanso*) compiled by the priests of the *Utdru* wihare at *Anurádhapura*, the ancient capital of *Ceylon*. "I will perspicuously set forth the visits of *Buddho* to *Ceylon*; the histories of the CONVOCATIONS and of the schisms of the theros; the introduction of the religion (of *Buddho*) into the island; and the settlement and pedigree of the sovereign *Wijayo*."

In cursorily running over the book, at the opening of the sixth *Bhánawáro* or chapter, which should contain the 'history of *DHAMMA'SÓKO*, I found the lines quoted from my note to you in page 791.

This *Dípawanso* extends to the end of the reign of *MAHASINO*, which closed in A. D. 302. As the *Maháwanso*, which quotes from this work, was compiled between A. D. 459 and 477, the *Dípawanso* must have been written between those two epochs. I have only cursorily run over the early chapters to the period where the Indian history terminates without collecting from that perusal any new matter, not found embodied either in the *Maháwanso* or its *Tiká*, excepting the valuable information above mentioned, and a series of dates defining the particular year of each sovereign's reign, in which the several hierarchs of the Buddhistical church died, down to *MOGGALIPUTTATISSO* the chief priest who presided at the THIRD CONVOCATION in the reign of *DHAMMA'SÓKO*. These dates may remove some of the incongruities touched upon in my second paper on Buddhistical annals.

This Burmese copy, however, of the *Dípawanso* is very imperfect. Each *Bhánawáro* ought to contain 250 verses. Several chapters fall short of this complement; and, in some, the same passage is repeated two and even three times.

It will be highly desirable to procure, if possible, a more perfect copy, together with its commentary, (either *Tiká* or *Aṭṭhakathá*) from the Burmese empire.

On my return to *Kandy*, and production of the *Dípawanso* to the Buddhist priests, who are my coadjutors in these researches, they

* Vide in the quarto edition the introduction to the *Maháwanso*, page xxxi.

reminded me that there was a *Pāli* work on my own shelves, which also gave to DHANMÁSÓKO, the appellation of PIYADASO. The work is chiefly in prose, and held in great estimation for the elegance of its style: hence called "*Rasawāhinī*"—"sweetly flowing" or the "harmonious stream."

The Singhalese version, of which this *Pāli* work is a translation, was of great antiquity, and is no longer extant. The present copies in that language are merely translations of this *Pāli* edition. I am not able to fix the date of this *Pāli* version, as the author does not give the name of the sovereign in whose reign he flourished—but the period is certainly subsequent to A. D. 477, as he quotes frequently from the *Mahāwanso*. The author only states, that this work is compiled by KORATTHAPÁLO, the pious and virtuous incumbent of the *Tunguttawankapariwéno* attached to the *Mahawihāro* (at *Anurádhapura*); and that he translates it from an ancient Singhalese work, avoiding only the defects of tautology and its want of perspicuity.

In one of the narratives of this book, containing the history of DHANMÁSÓKO, of ASANDHIMITTA' his first consort after his accession to the Indian empire, of his nephew NIGRO'DHO, by whom he was converted to Buddhism, and of his contemporary and ally DK'WA'NANPIYATISSO, the sovereign of Ceylon,—DHANMÁSÓKO is more than once called PIYADASO, viz.:

"*Madhuddāyako pana wānijo Déwalókató chawitwá, Pupphapuré riýakulé up-pajitrá PIYA'DASO kumáro hutwá chhattan ussápetwá sakala-jambódīpá éka-rájjan akūsi*."

"The honey-dealer who was the donor thereof (to the *Paché Buddho*) descending by his demise from the *Déwalóko* heavens; being born in the royal dynasty at *Pupphapura* (or *Patilipura, Patna*); becoming the prince PIYADA'SO and raising the *chhatta*†, established his undivided sovereignty over the whole of *Jambudīpa*"—and again—

"*Andagaté Piyadāso, náma kumáro chhattan ussápetwá Asókó náma DHANMA RA'JA' bhavissati*."

"Hereafter the prince PIYADA'SO having raised the *chhatta*, will assume the title of ASÓKÓ the DHAN'MA RA'JA', or righteous monarch."

It would be unreasonable to multiply quotations which I could readily do, for pronouncing that PIYADASO, PIYADASINO‡ or PIYADASI, according as metrical exigencies required the appellation to be written, was the name of DHANMÁSÓKO before he usurped the Indian empire; and it is of this monarch that the amplest details are found in *Pāli* annals. The 5th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, and 20th chapters of the *Mahāwanso* contain exclu-

* Vide page 24 of the *Mahāwanso* for an explanation of this passage.

† Parasol of dominion.

‡ Piyadassino is the genitive case of Piyadasi, प्रियदर्शिनः.—ED.

sively the history of this celebrated ruler, and there are occasional notices of him in the *Tikā* of that work, which also I have touched upon in my introduction to that publication. He occupies also a conspicuous place in my article No. 2, on Buddhistical annals. His history may be thus summed up.

He was the grandson of CHANDAGUTTO (SANDRACOTTUS) and son of BINDUSÁRO who had a numerous progeny, the issue of no less than sixteen consorts. DHANMÁSÓKO, who had but one uterine brother, named TISSO, appears to have been of a turbulent and ambitious character; BINDUSÁRO consigned him to an honorable banishment by conferring on him the government of *Ujjéni* (*Oujéin*)* “in his apprehension arising from a rumour which had prevailed that he (ASÓKO) would murder his own father; and being therefore desirous of employing him at a distance, established him at *Ujjéni*, conferring the government of that kingdom on him.”

While administering that government he formed a connection with CHE'TIYA DE'WI a princess of *Chétiyagiri*, and had by her a son and daughter, MAHINDO and SANGHAMITTA', who followed their father to *Patilipura*, subsequently entered into the sacerdotal order, and were the missionaries who converted *Ceylon* to Buddhism. CHE'TIYA DE'WI herself returned to her native city. On his death-bed, BINDUSÁRO sent a “letter” recalling him to his capital, *Patilipura*. He hastened thither, and as soon as his parent expired, put all his brothers, excepting TISSO, to death, and usurped the empire. He raised TISSO to the dignity of *Uparájá*,—which would appear to be the recognition of the succession to the throne.

In the 4th year after his accession, being the year of *Buddho* 218, and before Christ 325†, he was inaugurated, or anointed king. In the 3rd year of his inauguration, he was converted to Buddhism by the priest NIGRODHO the son of his eldest murdered brother, SUMANO. In the 4th year TISSO resigned his succession to the empire, and became a priest. In the 6th MAHINDO and SANGHAMITTA also entered into the sacerdotal order. In the 17th the THIRD CONVOCATION was held, and missionaries were dispatched all over Asia to propagate Buddhism. In the 18th MAHINDO arrived in *Ceylon*, and effected the conversion of the Ceylonese monarch DE'WANANPIYAT'SSO and the inhabitants of this island. In the same year SANGHAMITTA, the bo-tree and relics were sent by him to *Ceylon*. In the 30th his first con-

* Introduction to the *Mahāwanso*, p. xlii.

† The second paper on “Buddhistical Annals” notices the discrepancy of about 60 years between this date, and that deduced from the date of European classical authors connected with ALEXANDER'S invasion.

sort espoused after his accession, ASANDHIMITTA', who was zealously devoted to Buddhism, died ; and three years thereafter he married his second wife. He reigned 37 years.

The five short insulated lines at the foot of the *Allahabad* pillar, having reference to this second empress, is, by its position in the column, a signal evidence of the authenticity, and mutual corroboration of these inscriptions and the *Pāli* annals. As DHAMMA'SO'KO married her in the 34th year of his reign, she could not have been noticed in the body of the inscriptions which were recorded on the 27th. I fear we do not yet possess a correct transcript of these five lines*. The passage in the *Mahāwanso* which refers to this queen is curious, and may hereafter assist the correct translation of these five lines. I therefore insert it.

- 1 *Atthārasāhi wassamhi Dhammāsókassa Rājino*
Mahāméggha-wanārdmé mahābódhi patitthahi.
- 2 *Tatō dwādanamē wassē mahēsi tassa rājino*
piyā Asandhimittā sá mātā Sambuddhamānikā.
- 3 *Tatō chatutthawassamhi, Dhammāsóko mahipati*
tassārakkhan mahēsittē thapēsi wōsamā sayān.
- 4 *Tatōtu totiyē wassē sabbālārūpamānini*
"mayāpicha ayān rūjā mahābódhin mamāyati,"
- 5 *Ili kūlhawasān gantwā, attanōtattha kārīkā*
mapṭukanakayūgēna mahābódhimaghātayi.
- 6 *Tatō chatutthē wassamhi Dhammāsóko mahāyaso*
anichchatāwasampattō: sattatinosamā imā.

"In the eighteenth year of the reign of DHAMMA'SÓKO, the bo-tree was planted in the *Mahāmégghawano's* pleasure garden, (at *Anurādhapura*). In the twelfth year from that period, the beloved wife of that monarch, ASANDHIMITTA', who had identified herself with the faith of Buddha, died. In the fourth year (from her demise), the rājā DHAMMA'SO'KO, under the influence of carnal passions, raised to the dignity of queen consort, an attendant of her's (his former wife's). In the third year from that date, this malicious and vain creature who thought only of the charms of her own person, saying, "this king, neglecting me, lavishes his devotion exclusively on the bo-tree,"—in her rage (attempted to) destroy the great bo with the poisoned fang of a toad. In the fourth year from that occurrence, this highly gifted monarch, DHAMMA'SO'KO, fulfilled the lot of mortality. These years collectively amount to thirty-seven."

I have not had time to examine the fifth inscription round the *Delhi* column carefully, and I apprehend that the transcript is not altogether perfect yet. The last line and half of this inscription, I should be disposed to read thus :

"*E'īdu Dāwānanpiya āha ; 'iyān dhanmalibī ata a'hasitthambāni, Wisatiṭṭha-lakkhānwa tata kantaviyā : ēna ēsa chiraṭṭhikasiya.*" In the *Pāli* considered

* See page 966 which had not reached the author when the above was written.—ED.

the most classical in *Ceylon*, the sentence would be written as follows : *Etan Dēwānapiya āha : iyan dhanmalipi attha atthasīlāthambāni Wēśāliṭṭha-lēkhāniwa tatha (tatha) katā ; tena tsā chiratṭhitikā siyā.*

"DE'WA'NAN'PIYA delivered this (injunction). Thereafter eight stone columns have been erected in different quarters like the inscriptions on DHANMO established at *Wēśāli*. By this means this (inscription) will be perpetuated for ever."

If this reading be correct*, as I have said before, we have still five more of these columns to discover in India.

I would wish to notice here that there are several errata in the *Pāli* quotations in the July journal occasioned, probably, by the indistinction of the writing of my copyist. I mention this merely to prevent *Pāli* scholars from inferring that those errata are peculiarities in the orthography of that language as known in *Ceylon*. For instance in page 586, you quote me as translating *Viyódhanmā* "perishable things," whereas the words ought to have been "*Waya-dhanmā*."

The inscription fronting north (as corrected by Mr. TURNOUR.)

1. Dēwānapiya Pāṇḍu sō rājā hēwan āhā " Sattawīsati
2. wasa abhisitēna mé iyan danmallipi likhāpitā-
3. hi. Dantapurato Dasanan upādayin, ananta agāya danmakāmatāya
4. agāyaparikhāya, agāyasaśanāya, agēna bhayena,
5. agēnanusāhēna ; ēsāchakho mama anusathiyā.
6. Dhanmapēkhā, dhanmakāmatācha, suwē suwē, wadhītā. wadhisanthicewa.
7. Purisāpicha mé, rakusācha, gawayācha matimācha anuwidhiyantu
8. sanpātipādayantucha, aparanchaparancha samādayitwā hēmēwā antā
9. mahāmātāpi. E'sahiwidhi yā iyan, dhanmēna pālītā, dhanmēna widhiṇā
10. dhanmēna sikhāyatā, dhanmēna galīlī." Dēwānapiya Pāṇḍu sō rājā
11. hēwan āhā : " Dhanmō sādhuḷiyancha dhanmēti. Apāsananwā bahūkan yāni

* This reading involves so many alterations of the text that I must demur to it, especially as on re-examination I find it possible to improve my own reading so as to render it (in my own opinion at least) quite unobjectionable. The correction I allude to is in the reading of *āthā*, which from the greater experience I have now gained of the equivalents of particular letters, I am inclined to read as the Sanskrit verb *āśāt* (*Pāli āthā*).—The whole sentence Sanskritized will be found to differ in nothing from the *Pāli*—except in that *stambha* is masculine in the former and neuter in the latter :—and that the verb *kataviyā* is required to agree with it.

Iyam dharmalipi ata āśāt, sila-stambhā (ni)vā siladhārikā(ni)vā talaḥ kartaviyā (ni), ena (or yena) eśā chirasthiti syāt.

"In order that this religious edict may stand (remain),* stone pillars and stone slabs (or receptacles) shall be accordingly prepared ;—by which the same may endure unto remote ages."

Āthā might certainly be read as *ashto* eight, but the construction of the sentence is thereby much impaired, and further it is unlikely that any definite number should be fixed upon, without a parallel specification of the places where they should be erected.—ED.

12. dayadáni saché sóchayé chakhudánápi mé bahuwidbadinno ? Dīpada-
13. chatupadésa pariwāracharésu wiwidhémé anugahé katé ; A'póné .
14. dakhinéyé anālpicha mé bahūni kayanāni katāni. Étāya mé
15. athāya iyan dhanmalipi likhāpitā hēwan anupaṭipajatu ; chiran
16. ṭhitākāche hōtiti. Yōcha hēwan sanpaṭipajisati, sésākatan karontīti !"
17. Dēwānanpiya Pāṇḍu sō rājā hēwan āhā : " ' Kayananmēwa dakhati' iyan mé
18. ' kayanōkatōti' nō na papau dakhati : iyan mé ' pāpōkatōti' iyanwa ' ādinawā'
19. nāmati. Dupachawékhōchakhō éśā, éwachakhō éśā dakhīyé ; imā na
20. ādinawagāminimā. Athucha diné, nithuliyé, kōdhamané, isu-
21. ké, lēnauwhaké, mēralābhāsāyāsé, éśabādhādikhā, iyan mé-
22. pi dinakāyé, iyan manan mé pāratikāyé.

The inscription fronting East.

1. Dēwānanpiya Pāṇḍu sō rājā hēwan āhā. " Sattawīsati
2. wasa abhisitēna mé iyan dhanmalipi likhāpitā. Lōkasa
3. hitasukhāva sātān apahatattā dhanmawudhi. Pāpōwā
4. hēwan lōkasa hitan wakhati. Pachawékhāma athau iyan.
5. Nīrésu hēwan patiyā santēsu, hēwan apikathēsu,
6. kāmukāni sukhā awhāmīti. Tathāchéwan dūhēmi hēmēwā-
7. séwanikāvésu pachuwékhāmi. Séwa Pā-andhāpi mé pūjanti
8. wiwidhāya pūjāya. Ichin iyan atau pachūpagamané
9. samānōkhiyamāté. Sattaw.sati wasa abhisitēna mé
10. iyan dhanmalipi likhāpitā."
11. Dēwānanpiya Pāṇḍu sō rājā hēwan āhā. " Yō atikanta-
12. antaré rājāné po-échéwa irisa kathān jāné.
13. Dhanmawadhīyé wadhēya ; nōcha jāné anūrūpāya dhanmawadhīyā
14. wadhitha" Etan Dēwānanpiya Pāṇḍu sō rājā hēwan āhā. " Esama-
15. puṭhan atikantēcha antaré hēwan irisa rājāné, kathān jāné ?
16. anurupāya dhanmawadhīya wadhayēti ? Rōchojanō anurupāya
17. dhanmawadhīyā wadhētha sékiupūjāné anupaṭipajayé.
18. Kārasujanā anurupāya dhanmawadhīyā, wadhīyanti ; kanasukāni
19. aṭṭhamayēhi ramawadhīyanti. E'tan Dēwānanpiya Pāṇḍu sō hēwan
20. āhā " éśamé puṭhan dhanmasāwanēau séwayé. Mé dhanmānusaṭāné
21. anuséśēmi. E'tan janā sutan anupaṭtipijipātā uchau namāsātā."

The Inscription fronting South.

1. Dēwānanpiya Pāṇḍu sō rājā hēwan āhā. " Sattawīsati wasa
2. abhisitēna mé, imani satāni awadhīyūni kathāni-śeyathā-
3. suké, s. rika, aruné, chakawaké, hansa, nandimukhā, gōrōthé,
4. jatukā, abā, kāparékā, datti, anthikamawé, w'auwéyākā,
5. gaṇgapuputhakā, sankujamawé, kuḍhuthasagakā, panarasé, simaré,
6. saudiké, rokapada, parasate, sēt-kupōtē, gāmakapōtē,
7. savé, chatupadé, yepi ; luddaganō été uachakhādiyatū.
8. E'lakacha, sūkārēcha, gabhaniwāpāyiminawa, awadhīyāpantu ke-
9. picnakēna ; anamamsiké wadhikakathé nō kathawiyé : tāsé sajiwé
10. nōttipātawiyé ; glawé unatāyēwā wihāsiyēwā, nōttipātawiyé,
11. jiwēunjliwēnē pōsitawiyé. Tisu chatumāsīsu tishāyan punamāsīyan,
12. tinidiwasāni, chuddasan, pannarasan paṭipadiyé, dhuwēyēcha
13. Anupōsatté, mure awadhīyé nōpi. wikētawiyé. Etanīyēwa diwasāni
14. nōgawanepi, kwatha, dugusiani, annanipi jiwānikīyāni
15. nō hantawīyāni. Aṭṭhamipakhāyé, chawudasiyé panarasiyé tāsīyé
16. punawāsāné tīsū chatumāsīsu, sūdiwasāyé, gōnānūna rakhitawiyé
17. ajaké, élaké, sūkaro éwanpi anuē nirakhīyatāné, nirakhitawiyé.

19. Tisáyé punawásnyé chatumásiyé chatumásapakhayé apawasá gónásan-
 19. rakhaté nó kathawiyé. Yáwa sattawisanti wasa abhisiténa mé, étáye
 20. antarikáyé pásá wienti bandhanamókháni katáni."

The Inscription fronting West.

1. Déwánanpiya Pándu só rája héwan áhá. " Sattawisanti wasa
2. abhisiténa mé, iyan dhanmalipi likhápita. Rajjaká mé
3. bahusu pásasatasahasésú jauésú áyanti. Teyan yó abhiparé
4. dandawé atapati, yé mé kathi kin ? Té rajjaká aswata abhitá
5. kinmáni, pawatayéwun janasa janapadasa hitasukan rupadáhéwun ;
6. anugahénéwáchá, sukhiyana dukhiyana jánisanti ; dhanináya té nacha-
7. wiyéwa disanti janana janapadan. Kin téhi attancha parataucha
8. arádhayéwun ? Té rajjaká parusatá pañachuritawé man purisánuipimé
9. * ródhanáni paticharisanti ; tépi chakkéna wiyówadisanti yé na mé rajjaká
10. charantá árun dhayitawé, athahi pñanwiya táyé dhátiyá nisujita ;
11. aswathérátiwiya tá dháti, charantá mé pñan sukhan parihathawe.
12. Héwan inama rajjaká katé, janapadasa piñasukháyé ; yéna été abhitá
13. aswatha sátan awamóná, kamáni pawatáyéwáti. E'téna mé rajjakánnu
14. abhiharawadandawé atapatiyé kathi, iritawéchi ésákiti
15. wiyóhrasamuticha siyá. Dandásamatácha, awatépicha, mé avuté,
16. bandhana budhúnan manusúnan tiritadandínan patawadhéuan, tñidiwasáni, mé
17. Yutté dinné, nítikéríkáni niripayihantu, Jíwítáyé ánan
18. násantanwá niripayantu : dñnan dahantu : puhitakan rupawápanwá karontu.
19. Irichimé héwan nira dhasipi karipipuratan arádhayéwapi : janasacha
20. wadhati : wiwidhadanumacharané ; saynmé dñnasauwibhágóti†."

Translation of the Inscription fronting North.

The rája PA'NDU, who is the delight of the déwas, has thus said.

" This inscription on *Dhanmo* is recorded by me who have attained the twenty-seventh year of my inauguration. From *Dantapura*, I have obtained the tooth (relic of BUDDHO), out of innumerable and inestimable motives of devotion to *Dhanmo*,—with the reverential awe, and devout zeal (due) to the precious religion which confers inestimable protection. This (inscription), moreover, may serve to perpetuate the remembrance of me.

" Those who are observant of *Dhanmo*, and delight in *Dhanmo*, growing in grace, from day to day, will assuredly prosper. Let my courtiers, guards, herdsmen, and learned men, duly comprehend, and fully conform to (the same) uniting (to themselves) all classes, the rich and the poor, as well as the grandees of the land. A course such as this, sustained by *Dhanmo*, inculcated by *Dhanmo*, and sanctified by *Dhanmo*, is the path (prescribed) by *Dhanmo*."

The rája PA'NDU, who is the delight of the déwas, has thus said,

" Thus this *Dhanmo* is most excellent in its righteousness."

Wherefore should I who have been a charitable donor, in various ways, grieve (to bestow) charitable gifts, whether it be a little food, or a great offering, or even the sacrifice of my eyes ? To bipeds and quadrupeds, as well as those employed in my service, various acts of benevolence have been performed by me ;

* The letter *chh* is read as *r* throughout ; and the letter *u* as *ru*.—ED.

† By comparing this version with that published in July, it will be seen to what extent the license of altering letters has been exercised. The author has however since relinquished the change of the Rája's name, in consequence of his happy discovery of PIYADASI's identity.—ED.

and at the *Apáná* (hall of offerings) to those worthy of offerings, by me, both food and other articles, involving great expenditure, have been provided.

"Let it be duly understood that this inscription has been recorded by me with this object, as well as that it should endure for ages. Would but one person fully conform thereto, what would (not) the rest do!"

The rája PA'NDU, who is the delight of the déwas, has thus said.

"(It may be said) 'this (dispensation) appears to be prodigality itself;' or of me 'he is addicted to prodigality.' That would not appear to us to be an act of impiety; or this, of me, 'he is a sinner;' or this, 'he is a miscreant,' or any such reproaches. The evil designing man (may say) these things, and such a person may represent them so, but they are not the road to (do not inflict) degradation."

"Moreover, by my contemplating the distresses affecting the poor, the unfortunate, the resentful, the proud, the envious, those bent with age, and those on the eve of becoming a prey to death,—(that contemplation) would produce in me a due sense of commiseration towards the destitute."

The Inscription fronting East.

The rája PA'NDU, who is the delight of the déwas, has thus said.

"This inscription on *Dhanmo* has been recorded by me who have attained the twenty-seventh year of my inauguration. *Dhanmo* prevails for the happiness and welfare of mankind; as well as to prevent the forfeiture of their salvation. Even the sinner would admit, that it (is essential for) the happiness of mankind. Let us, therefore, stedfastly contemplate this truth. While righteous men thereby become devoted to charity, and are bent on discoursing (thereon), let me encourage their benevolent proceedings. In like manner, let me extend my solicitude towards the wealthy; and let me be specially regardful of the multitudes under my sway. Even my *Pásandhi* subjects present me with various tributes. I formed this resolve, under the conviction of the supreme beatitude, (resulting) from an individual himself setting an example."

The rája PA'NDU, who is the delight of the déwas, has thus said.

"This inscription on *Dhanmo* is recorded by me who have attained the twenty-seventh year of my inauguration—should any person, after the extinction of my regal authority, learn from my subjects themselves, such a precept as this, he would prosper by the grace of *Dhanmo*; should he not acquire that knowledge, he (cannot) prosper by the orthodox *Dhanmo*." The rája PA'NDU, who is the delight of the déwas, has thus asked this (query). "He, who after the extinction of my authority, would not acquire this knowledge, how should he learn these royal mandates? how can he prosper by the orthodox *Dhanmo*? The well disposed person, (who) has prospered by the orthodox *Dhanmo*, would evince gratitude for the benevolence of his benefactors. (All) conforming, good men prosper by the orthodox *Dhanmo*, and realize the bliss of the eight heavens." The rája PA'NDU, who is the delight of the déwas, has declared this also. "He who attends to this precept of mine, would by the observance of *Dhanmo* lead a righteous life. Let me also, by the observance of *Dhanmo*, attain an exalted station (of righteousness). The inhabitants at large, who conform to this edict, (will) eschew evil."

Translation of the Inscription fronting South.

The rája PA'NDU, who is the delight of the déwas, has thus said.

" By me, who have attained the twenty-seventh year of my inauguration, these animals have been forbid to be killed,—namely, parrots and mainas (*gracula religiosa*) in the wilderness; the brahmany duck (*anas casaca*); the goose (rather the mythological and fabulous "*hansa*") ; the nandimukā (supposed to be the fabulous "*kinnari*") ; the golden maina (*turdus salica*,); the bat, the crane, the blue pigeon, the gallinuli, the sankagamawé, wédawéyakā, the gangapuputhakā, the sankagamawé, the kadhathasayakā, the panarasé, the simaré, the sandiké, the rókupadé, the parasaté, the white dove, and the village dove, as well as all quadrupeds. Th se, let not the tribe of hunters eat. For the same reason, let not sheep and goats which are fed with stored provender, be slaughtered by any one; and those who are accustomed to receive a portion of the meat (of animals killed) should no longer enter into engagements to have them slaughtered on those terms; nor should ferocious animals either be destroyed; neither in sporting or in any other mode, nor even as a merriment, should they be killed: (on the contrary) by one living creature, other living creatures should be cherished. During (all) the three seasons of the year, on the full moon day of their (lunar months) as well as on these three days, the fourteenth, the fifteenth, and the first (of each moiety of the lunar months) (each of) these being days of religious observance, not only the agonies of slaughtering, but selling also should not be allowed. During these days, at least, on the mountain, in the wilderness, and everywhere, even the multitudes of the various species of animals which may be found disabled, should not be killed. During the three seasons, on the eighth, the fourteenth and the fifteenth (of each moiety of the lunar month) being the holy days devoted to deeds of piety, oxen, goats, sheep and pigs, which are ordinarily kept confined, as also the other species which are not kept confined, should not be restrained. Nor should it even be hinted, on the holydays of the four months of each of the seasons, that the stalled oxen even should be kept confined. By me, who have attained the twenty-seventh year of my inauguration, during the course of that period, living creatures have been released from the twenty evils (literally restraints) to which they were subjected."

The Inscription fronting Weḡ.

The rāja PA'NDU, who is the delight of the déwas, has thus said.

" This inscription on *Dhanmo* is recorded by me in the twenty-seventh year of my inauguration. My public functionaries intermingle among many hundred thousands of living creatures, as well as human beings. If any one of them should inflict injuries on the most alien of these beings, what advantage would there be in this my edict? (On the other hand) should these functionaries follow a line of conduct tending to allay alarm, they would confer prosperity and happiness on the people as well as on the country; and by such a benevolent procedure, they will acquire a knowledge of the condition both of the prosperous and of the wretched; and will, at the same time, prove to the people and the country that they have not departed from *Dhanmo*. Why should they inflict an injury either on a countryman of their own or on an alien? Should my functionaries act tyrannically, my people, loudly lamenting, will be appealing to me; and will appear also to have become alienated, (from the effects of orders enforced) by royal authority. Those ministers of mine, who proceed on circuit, so far from inflicting oppressions, should henceforth cherish them, as the infant in arms is cherished by the wet-nurse; and those experienced circuit ministers,

moreover, like unto the wet-nurse, should watch over the welfare of my child (the people). In such a procedure, my ministers would ensure perfect happiness to my realm."

"By such a course, these (the people) released from all disquietudes, and most fully conscious of their security, would devote themselves to their avocations. By the same procedure, on its being proclaimed that the grievous power of my ministers to inflict tortures is abolished, it would prove a worthy subject of joy, and be the established compact (law of the land). Let the criminal judges and executioners of sentences, (in the instances) of persons committed to prison, or who are sentenced to undergo specific punishments, without my special sanction, continue their judicial investigation for three days, till my decision be given. Let them also as regards the welfare of living creatures, attend to what affects their conservation, as well as their destruction: let them establish offerings: let them set aside animosity.

Hence those who observe, and who act up to these precepts would abstain from afflicting another. To the people also many blessings will result by living in *Dhamo*. The merit resulting from charity would spontaneously manifest itself."

VI.—*Account and drawing of two Burmese Bells now placed in a Hindu temple in Upper India. By Capt. R. WROUGHTON, Revenue Surveyor, Agra division.*

In the month of January last, while engaged upon the revenue survey of zillah *Sirpurah*, I accidentally heard of a celebrated Burmese bell, in the possession of Resáladár BHEEM SINGH (late of the 2nd local horse) and lodged at a sewala, the property of that individual, situated in the village of *Nudrohee* on the banks of the *Kalee Nuddee*, $2\frac{1}{2}$ miles west from the town of *Khass Gunj*. I was induced to visit the spot, and recognized old acquaintances in the Resáladár and bell; the former having been engaged with me in the night storm of the city of *Arracan*; and the bell, the identical one, which was found upon the capture of that place suspended in the temple (or pagoda) of *Gaudama muni*, a few hundred yards to the N. E. of the old stone fort, being the position occupied by the 2nd regiment of local horse, during the calamitous rainy season of 1825.

The history of this bell is very unsatisfactory, and very brief. Upon the breaking up of the south-eastern division and the return of the troops to Bengal, BHEEM SINGH solicited permission to carry away the bell in question, and he states that consent was given to his application, both by the late respected General MORRISON, and Mr. T. C. ROBERTSON, Political Agent; upon what authority however, this proceeding can be justified, I know not, neither am I disposed to agitate

the question, because it might disturb its worthy owner in the possession of an article, which in its present position is well calculated to perpetuate the success of the Company's arms in Burmah, and to which BHEEM SINGH attaches the greatest value.

The Resáladár (an active fellow and gallant soldier) when the 2nd local horse marched from *Arracan* to *Chittagong*, by the interior, (or *Rutnapulling* route,) contrived to persuade the master of a sloop to convey the bell to that station, where it arrived before its owner, was seized by the officer in charge of the magazine, and was only liberated and restored to BHEEM SINGH, consequent on a reference being made to the supreme government. From *Chittagong* the bell was conveyed in a country boat, to *Futtyghur*, and from that place was finally transported on a truck constructed for the occasion, to its present situation. The above comprises all the information I could gather from the Resáladár regarding it.

Nudrohee is fixed on the direct route from *Muttra* to *Soron* on the Ganges viâ *Hathras*, *Sikundruh raow*, and *Murarah*; thousands of pilgrims from the western states frequent this road, on their way to bathe in the Ganges, and by this means the celebrity of the bell has spread far and wide.

BHEEM SING having permitted me to examine the bell and make a drawing of it, I thought the opportunity a favorable one, and availed myself of his good humour and civility; and I was the more urged to take this trouble, as I consider the bell a beautiful specimen of workmanship, of great antiquity, and well worthy a report and representation being made of it.

Having constructed a wooden hollow parallelepipedon for the purpose, I ascertained that the solidity of the bell equalled a prism, the area of whose base is the square of 44.3 inches \times by the height 6.278 which gives for the content 12320, 4122^o cubic inches: the specific gravity of the metal which is a near approximation to the truth, I determined in the following manner.

Mr. JAMES GARDNER of *Khass Gunj* possesses a small Burmese bell, which was also brought round from *Arracan* by the late Lieut.-Col. GARDNER, and this bell the former gentleman kindly lent to me. I weighed it with English weights and scales (thermometer Fahrht. scale, ranging 60°) both in and out of water, and found it 224lbs. 4 ounces, and 195lbs. 12 ounces avoirdupois respectively, which makes its specific gravity 7868; its solidity I ascertained to be equal to a cylinder, the base of a diameter 17.4 inches and the height 3.2 inches which gives 760.920 cubic inches, and as the material, or the metal

of which the small bell is composed assimilates very closely with that of the large one, I have used it to determine the weight of the latter, and which I find by the simple rule of proportion is $31\frac{1}{2}$ hundred weight nearly.

The accompanying sketches I personally executed from scale and measurement, and can vouch for their critical resemblance to the originals; and the facsimile of the inscriptions I have carefully compared, and can pronounce with safety upon their accuracy. I may here mention that until I filled the crevices of the letters on the bell *with yellow ochre* (and I tried many other colors), I found it utterly impossible to distinguish, and copy faithfully the inscription through the tracing paper, although the paper was extremely thin, oiled, and rendered transparent for the purpose.

The representation of the small bell, has been executed on a somewhat larger scale, because I could not otherwise satisfactorily exhibit its mouldings.

I will not occupy your time with any further observations, the drawings and copy of inscriptions will speak for themselves; and if they be considered useful and acceptable to the Asiatic Society, the little trouble I have taken will be amply compensated.

I cannot however resist communicating the particulars of an attempt made by a native to impose upon me a feigned translation of the inscription, because the circumstance will shew how far the disposition of these people leads them to practise deception and roguery whenever opportunity offers, and they can hope to turn it to account.

I had offered a remuneration of two goldmohurs to any person who could, and was willing to translate the inscription, and I made this offer because I had heard that one or two Arracanese Mugs who came round to Bengal with GARDNER's horse, were residing in the neighbourhood of *Khuss Gunj* and could accomplish the task: I tried one man and found him incompetent, when a Tanjore brahmin who had come to this part of the country on a pilgrimage presented himself, declared his ability to undertake the office, and to convince me of his fitness, produced several specimens of a written character having a strong resemblance to Burmese; and which in my presence he appeared to read and write with facility. Flattering myself that I had found a clever and useful fellow, I at once set him to work on the large bell inscription; and attended on the following day at the *sewala* to see what progress had been made. I found that one sheet containing 10 lines, had been faithfully transcribed; and that the brah-

min had copied 4 more lines on the second sheet ; the first I directed him to transcribe again on a new sheet, while I would complete the second. I now determined to put this brahmin's honesty to the test, and while the fellow was busily engaged at a distance from me, I entered one line on the second sheet, resembling the inscription, that is, the line contained Burmese letters throughout, which I had fancifully put together : to this line I added four or five others correctly traced, and then called the brahmin to translate the whole sheet. It amused me to find, that he read *my composition* and the Burmese, with equal readiness, and apparent confidence, but when I applied the copied inscription to the bell, and he perceived no resemblance in the copy to the original, and that I had gravelled his ingenious effort to delude and rob me, it would be difficult indeed to describe his discomfiture. He never for an instant endeavoured to deny the attempt at imposition, but coolly defended the proceeding on the grounds of poverty, and the almost certain prospect he entertained of escaping detection.

NOTE.—Having prepared the plates for this paper we have inserted them in the present volume, although we are unprepared to subjoin a copy and translate of the longer inscription, which however perfectly executed in facsimile has proved beyond RATNA PAULA's power of deciphering, as well as that of Col. BURNES and his Burmese Pandit now in Calcutta. By their advice I have sent it to Mr. BLUNDELL at *Moulmein*, but after all nothing very interesting can be expected from a document of such a nature. The smaller inscription Col. BURNES obligingly took in hand, and we have the pleasure to subjoin his note with the text in Burmese—the facsimile it is not necessary to lithograph.—ED.

Inscription on the Small bell.

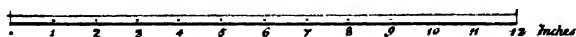
ဇေယျတူ။ နေဝဒေဝိနီ။ ရာဇရာဇိနီ။ မဟာမုနိနီ။ သီရိန္ဒရ။
 လောကမျက်ရှု။ သုံးလုံးမှီနီကင်း။ တရားမင်းသည်။ လေးစင်းပြ
 စာအာသဝတို့နှိပ်မွန် : ကုန်သောဝေနေယသက္ကဝါအပေါင်း
 တို့အားတရားတည်း ဟူသောအမြိုက်ငြိမ်းဆေးထိုက်ကျေး
 တော်မူ၍ပရိနိဗ္ဗာန်စံယူတော်မူပြီး သည်နာကာလ။ ဣ
 ဣက်ခဲဓမ္မစွာသောသာသနာတော်အတွင်း : နှိကြိုကြိုက်သ
 မြင့်အသင့်နှစ်လုံးစွဲသုံးအမှန်သဗ္ဗညာဏ် သက်လေ့ရှိသော

မောင်မှတ်သမီး မောင်နွဲ့သည်။ သဒ္ဓါ။ သီလ။ သုတ။ စာဂ။ စ
သော သူတော်ကောင်းတို့၏တရား နှိမ္မေလျော်သည်ဖြစ်၍ချ
ပ်မြဲကြည်လင်စွာသန္တာဌာဌာတိရှိလျက်။ သမုတိခန္ဓာနုဗ္ဗေတိပြ
ည်ကြီးဝယ်ရေမီးအစုံသောတန်ခိုး ဗျာဒိတ်ဟာ ခြေဖျာသော
ရောင်ခြည်တော်စသောဂုဏ်နှင့်ပြည့်စုံတော်မူသောဓမ္မတော်
ဓာတ်တော်တို့၏ကိန်း ဝပ်စုဝေးရာမဟာစေတီဘုရား နှိမ္မေ
ချိန် ၉၂၃ သောင်း ဤခေါင်းလောင်းကိုအပေါင်းရေမြေသန္ဓေရေ
အား သက်သေတည်ထားထိုင်ကြားထွ်ခါနီးပါ၏။ ။ ဤသို့ထွ်
ရသောကုသိုလ်အသို့ကိုလည်း ရေမြေသခင်။ လက်နက်စ
ကြာအရှင်ဆဒ္ဓါနိဆင်မင် ၊ သခင်အသျှင်သဝအရှင်မင်း တ
ရား ကြံဘုရားမင်း မိဘုရားသားတော်မြေးတော်တို့အား အမျှ
ဝေ၏။ မွေးသည်ဘခင်မိခင်ဆရာသမားမှစ၍သုံးဆယ်တဘုံ
နှံ့ကျင်လည်ကုန်သောဝေနေယသတ္တဝါအပေါင်း တို့အားအမျှ
ဝေပါ၏။ ။ ဤသို့ပြုရုံထွ်ခါနီးကြောင့်ဘဝနောင်လိသံသရာအ
ဆက်ဆက်တို့နှံ့ကောင်း သောသုဂတိဘဝတို့နှံ့လားသည်ဖြစ်၍
စုစုရိုက်တရား ဆယ်ပါး တို့ကိုကြည့်ရှောင်နှိုင်းသဖြင့်သ
သန္ဓေတရား ဆယ်ပါး တို့ကိုကျင့်ဆောင်သောယောကျာ်းမြ
တ်ဖြစ်၍အဆုံး စွန့်သောဘဝနှံ့မောမူရန်ပြည်နိဗ္ဗာန်သို့အမှ
န်ရောက်ပါလိုသော။ ။ ရတနာမဏိ၍။ ။ ရှေ့ရောင်ပြိုင်တွင်။ မြစိ
င်တခို။ တောင်ကွ၍။ ။ ဆိုသော။ ။ မြန်တိုင်းအမရ။ နန်းရွှာနုဝယ်။
စကြသခင်။ ဆဒ္ဓါနိရှင်ဟု။ ဘုရင်ကြီးစစ်။ ဖြစ်လတ်သရော်



Robt. Wroughton del.

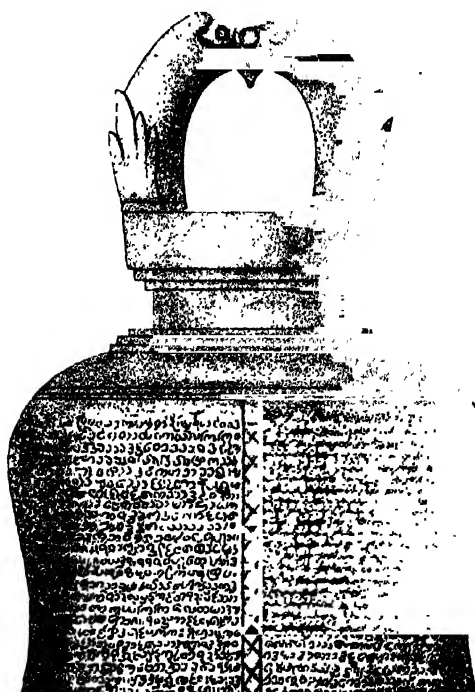
*Small Burmese Bell, the property of James Gardner Esq. Rhasgungy
Solidity, 764 Cub. Inches. Weight, 2 Hundred Weight. Specific Gravity 7868.*



Oriental Lith. Press. Calcutta.



Counter View of the upper portion of the small bell



။လွှဲကံတော်၌။ ရှင်တော်သဒနာ။ ပွင့်လင်းသာ၍။ သညာ
အန္တက။ဝစနတ်၌။ မောင်မှတ်ခေါ်တွင်။ အိမ်ရှင်မကြီး။
ဇနီးရှင်အူ။မောင်သူမယ်ယ။ မောင်နှံမတို့။ ဖြူဆွသဒ္ဓါ။စေ
တနာဖြင့်။ ထောင်ရာဇက။ဒသအဋ္ဌာ။နှစ်ကောဇာတွင်။ဆုသီ
ပြီသာ။ဝိဗ္ဗန္တ၌။တွက်ဆသချက်။ ရက်အသက်ဝယ်။သတ္တာဘိ
သ။ခါကောင်းရ၍။ လဒ္ဓဓမ္မိယာ။သန့်ပြန့်စွာ၌။ များစွာကံ
ကျေး။လက်ခပေးလျက်။ ကြေးအသပြာ။၅ဝသာ၍။သံဝါရိ
ကံညောင်း။ဗန် ခေါင်းလောင်းကို။ရင့် ကြောင်းဆုယူ။ဤအ
တူ။သည်။နတ်လူမြဟ္ဌားကြေညာ ရှင်းညောင်သောင်း သော
င်းသာရခေါ်စေသော။

"I send you a fair version, which some Burmese at Calcutta and I have succeeded in making out of the facsimile of the inscription on the small *Arracan* bell. We have been obliged to guess one or two words. I send you also a translation of the Burmese, from which you will see that the inscription, like most Burmese inscriptions, contains nothing of any historical interest.—H. B.

Translation.

Be victorious or accomplished!! After the period when the sovereign of the *nats*, the king of kings, the chief of the saints, the most beautiful in appearance, on whom the eyes of the whole world rest, the pinnacle of the three orders of rational beings², and the lord of righteousness, had administered the delicious and relief-giving medicine, the moral law, to all sentient beings who are long immersed in the four streams or currents, and had proceeded to enjoy the state of *Naibhan*, MAUNG MUAT and his wife, having come to existence in the time of (GAUDAMA'S) religion which is most difficult to meet with³, possessing minds properly and sincerely disposed, imbued with true wisdom, taking delight in virtue, piety, charity, and the other duties of good men, and established in proper principles, made an offering, taking the whole earth and water to witness, of this bell weighing 9,230,000⁴, to the *Maha Zedi* pagoda, which is situated in the place called the great city of *Dimiawadi* (*Arracan*), and in which are collected and rest the sacred relics (of GAUDAMA), that are complete in the united streams of fire and water, the six-colored flames of light and other miraculous exhibitions⁵. May the merit of this charitable gift

be also shared' by the lord of earth and water, the possessor of the celestial weapon⁸, the master of the tshaddan' king of elephants, the arbiter of life and great king of righteousness (MENDARAQYIN, king of *Ava*, grandfather of the present king) his queen, sons and grandsons. May it be shared by the parents who gave (us) life, (our) teachers and all sentient beings who pass through the thirty-one different stages of existence⁹. (We) desire that in consequence of (our) having thus performed this charitable deed, (we) may, in future successive worlds, exist as good beings in the superior grade of man¹¹, capable of avoiding the ten evil works¹², and given to performing the ten good works¹³, and that in (our) last state of existence, (we) may verily reach the country of *Khemapuram Naibban*.

In Verse.

During the reign of the lord of the celestial weapon, master of the tshaddan elephant and the true great king, who resides at the royal city of *Amarapura* in the Burmese kingdom, which is situated upon that called the southern island, lying within the green division of the four bodies of color that issue joined together from the precious centre post¹⁴, the religion of the lord was extended and prosperous. In the warm season, on what was fixed by astrological calculation to be a prosperous day, the 27th day of the sign Taurus, (Burmese month Katsounn) in the Kauza¹⁵ æra 1180 (corresponding with the 2nd of May, 1818), I, known as, and significantly called by the name of MAUNG MHAT¹⁶, the mistress of my house MA GYIN and wife SHYEN-U, (two wives) and brother and sister, MAUNG THU and MAYA (his two children) have, after paying much, upwards of 50¹⁷ viss, for the hire of labourers, bestowed with pure motives and good will, in view to obtaining the reward (of *Naibban*) through perfection in virtue, this bell, the sound of which when struck extends afar and makes the ear attend. May nats, men and byamhas, above and below, listen to it with delight and cry aloud well done¹⁸!

¹ The Burmese often commence a writing with the *Pāli* phrase *zayatū*—which is usually interpreted by them to mean, "May it (the work now undertaken) be completed or fulfilled," but which, some pious Burmese say, rather means, "may they (the evil passions) be overcome," : "Be victorious over the evil passions." [It is simply the Sanskrit जयन्तु 'be victorious.'—ED.]

² The three superior orders of beings are, *Byamhas*, superior celestial beings ; *Nats* inferior ditto, and men.

³ According to the Burmese, there are four streams or currents that bear away all sentient beings, viz. : passion, existence, false doctrine and ignorance. These are also called for restraints or bands.

⁴ The term of GAUDAMA's religion, it is said, is 5000 years, and Buddhists think that to appear in a state of existence as a human being during this short term is a difficult and fortunate event to a sentient being.

⁵ The figures here are not quite clear, and an examination of the bell itself is necessary to ascertain to which description of weight they refer. If the figures are 9,230,000, they probably mean the small Burmese weight yue, 120 of which

go to the tical, and the weight of the bell will then be 76,916 ticals, 6 mus and 5 yues.

* GAUDAMA'S body displayed many miraculous appearances. He could, whenever he pleased, exhibit a stream of water from one nostril, eye, ear, hand, or foot, and a stream of fire from the other—and six streams of different colored glory were emitted from his body.

7 According to the Burmese the merit of a good deed may be participated by others, and particularly by those who praise or encourage the performer of it by exclaiming *thadu*, well done.

8 The Hindu *chakri* is the Burmese *tsakyá*, or celestial weapon.

9 The Tshaddan elephant is now the usual title of the white elephant, which, in ancient times, when there existed, it is said, ten different species of the animal, was the king or of the first class. Six-colored streams of light issued from its tusks also, whence *tsha-dant* or *tshaddan*, as my poor unfortunate friend, the late MYAWADI WUNGYIH, informed me.

10 The thirty-one different abodes or stages of existence, according to the Buddhists, have been described by Dr. BUCHANAN and other writers on their religion.

11 A person, according to the Buddhists, cannot attain *Naibban* or be perfected into a Buddh but from a state of existence as man—hence, all Buddhists, and particularly the women, pray that their future existence may be in the superior grade of man.

12 The ten evil works are 1, murder; 2, theft; 3, adultery; 4, lying; 5, speaking so as to destroy the affection entertained by two persons for each other; 6, speaking harshly or using abusive language; 7, frivolous or idle conversation; 8, coveting the property of others; 9, thinking of injuring others; 10, apostacy.

13 The ten good works are 1, charity; 2, keeping the five Buddhist commandments not to kill, steal, commit adultery, use intoxicating substances or tell falsehoods; 3, repeating certain short sentences calculated to restrain evil desires and promote abstraction and indifference to this life; 4, reverence for Buddh, his precepts and disciples, and for one's parents and teachers; 5, performing the services due to the same; 6, distributing the merit of one's good actions among other beings; 7, pleased with, and exclaiming *thadu*, or well done, at the good works of others; 8, hearing GAUDAMA'S religious precepts recited; 9, preaching or communicating a knowledge of the same to others; 10, firmness in religious faith.

14 The Myenmo Mount is here poetically alluded to. From the four cardinal points of this centre of the Buddhist world to the wall surrounding it, the space is equally divided by four different colors, red, green, yellow and white. In the green space is situated the southern island or *Tsabu-depa*.

15 The present Burmese æra which commenced A. D. 638.

The number of the year is so given in the verse, that it was at first supposed to be 1118 or 1756, but that date was 27 years before Arracan was conquered or Amarapura built by MENDABAGYIH, king of Ava. Further examination with Burmese satisfied me that the year is 1180 or 1818.

¹⁶ Mhat in Burmese means mark, and the bestower of this bell appears to have been born with some mark or discoloration about his body, whence he was named Mhat or Mark. The verse on the bell may be understood to mean that the donor was *marked* by nature and Mark by name.

¹⁷ Here again the meaning of the figures is not quite clear, whether referring to the weight of the bell or to the amount of expense incurred.

¹⁸ See note 7.

The last part of the inscription is in verse. Burmese verse consists of four syllables or five pronounced as four. The last syllable or last letter of one verse and the third or second syllable, or last letter of the third or second syllable, of the next verse, or of the two next verses, are made to chime together, and the last syllable or final letter in the last syllable of the last of these verses is often again connected by the same kind of rhyme with the following verses: e. g.

* Yafāna man *daing*¹ || Le yaung *pyaing*² dweng || mya *zaing*¹ ta kho¹ || taung kyon tsho² thau || myan dang amara¹ || nān thanā² way || Tsakya¹ tha khen¹ || tshuddan shyen² hu Bhuen³ gyih tē¹ || phyt² lat thānā || let² thek dau³ nhat || shyen dau³ tha thana || &c.

The verse is written like prose excepting at the end of each verse there is a *paik* or stop, a double line, like that above shown. The Burmese have an immense collection of poetry and take great pleasure in reciting it, and I have heard my amiable friend, the Catholic Missionary Père TARDOT, admire their poetry exceedingly, declaring that some, which he once read to me, was equal to any thing in Dante's!

VII.—Note on Inscriptions at Udayagiri and Khandgiri in Cuttack, in the *lāt* character. By JAS. PRINSEP, Sec. As. Soc. &c.

I have already mentioned that on Lieutenant KITTOX's departure for Cuttack I requested him to take the first opportunity of visiting the Khandgiri rock for the purpose of re-examining the inscription of which a lithograph was published by Mr. STIRLING in his Statistical Report on the province of Orissa.

My zealous friend saw enough, several months ago on a rapid visit there, to prove that the published copy was very incorrect; but it was only lately that he was able to repair to the spot again (a distance of 20 miles from Cuttack) to examine and copy the document in detail. I shall presently quote his own account of the difficulties he had to encounter in accomplishing the task I had imposed on his zeal and good nature;—but first I would call attention to a number of short inscriptions in the old character which he discovered on the occasion of his first visit, in the various caves of the neighbouring hill called Udayagiri; and which he carefully recompiled on his late trip, so as to leave no doubt of their accuracy as now represented in Plate LVII.

from his original sketches. It will be remarked that some of them are accompanied by symbols similar to those of the western caves in Colonel SYKES's collection ; but they are frequently destitute of such ornaments, and the general style of the writing is of a purer and therefore more ancient type than that of *Sainhadri*.

In my search for some of the catch-words which had proved of such avail in explaining the purport of the inscriptions at *Bhilsa* and *Sainhadri*, I could neither meet with the *dánam* of the former, nor the *dayadhamma* of the latter,—but in their stead I remarked a very common if not constant termination in a word of two syllables $\overline{\text{J}}\overline{\text{I}}^{\cdot}$ *lonam*, or $\overline{\text{J}}\overline{\text{I}}^{\cdot}$ *lenam* preceded in most instances by the genitival affix sa ; and in the only case, as of exception, by an equally regular genitive $\overline{\text{J}}\overline{\text{I}}^{\cdot}\overline{\text{I}}^{\cdot}$ *sirino*, from the noun *sri* (Sanskrit root सीर *gen.* सीरिणः): a worshipping of the sun. It was not until after many futile attempts with the pandit to find a better, that we were led to the supposition that the words *lonam* or *lenam*, must be the Páli equivalent for the Sanskrit participial noun लूनं *lúnam*, ‘cut or excavated;’ in this the vowel is changed from *u* to *o*, and the *n* from the dental to the Prákrit cerebral:—but in sound it must be confessed that there is little difference; while in sense, the term satisfies precisely the circumstances of the *Udayagiri* caves, which are generally small holes cut with the chisel from the solid rock—a stone of loose consistency easily worked with the rudest tools.

The catch-word once attained, the reading of this new string of inscriptions was an easy matter.

The first then, which occurs in a cave now called the "snake cave" at *Udayagiri* (hill of the rising sun) reads thus:

No. 1. *Chūlakamasa Kothājayācha.*

"The impregnable or unequalled chamber of CHULAKARMA."

Koṭha is precisely the *कोष्ठा* *koshṭha* 'an apartment.' The conjunction *cha* shews that the sense is incomplete, but the continuation on the sides of the same door (No. 2) is in bad preservation; viz.

No. 2. *Kamase. rikhi nayache pasāde.*

"and the appropriate temple (or palace) of *Karma* . . . (*rishi* ?)" only changing *pasādah* 'favor' into *pāsadah* (S. प्रासादः) palace.

No. 3, on the cave now called that of the tiger, reads as follows:

Ugara uvedasa sasuvino lonum.

"excavated by (of, UGRA AVEDA (the antivelist) (?) the *sasuvim*?"

No. 4, on an adjoining cave is equally unintelligible.

Mjipamadúti bákyá yanákiyasa lonam.

" The excavation of YANA'KIYA for....."

No. 5, commences and ends with the same words as the first inscription:

Chūlakumasa paseta kothūja (ya).....

The word *paseta* may be the Sanskrit *prasrita* "the humble" sc.—cell of CHULAKAMA.—*Chudakarma* is the rite of tonsure—from चूडा, a single lock of hair left on the crown of the head when shaved: and some allusion to a similar purpose of this cave seems preserved in its modern name of *pāwanagubha*, 'the cave of purification.'

No. 6, is on a cave now called the *Mānikpūra* or jewel-city cave. It begins and ends very intelligibly, but the central portion is erased: *Verasa mahārājasa kalingādhipatano ma kadepa sīrīno lonam.*

"The excavation of the mighty (or of VIRA) sovereign, the lord of *Kalinga*, &c.... of Kadepa (?) the worshipper of the sun."

In Sanskrit,—वीरस्य महाराजस्य कालिङ्गाधीपतिः.. कदेष सोरिषः लूनं VIRA may perhaps be the name of the *rāja* of *Kalinga* who dug this cave: for *stīrīto*—see the previous observations.

No. 7, over a small door in the same cave, seems to have been the work of a more youthful prince.

Kumaro vattakasa lonam.

"The excavation of the prince VATTAKA."

Then follows a more lengthy inscription (No. 8) on the *Vaikanta gubha* in which we also find mention of the *Kalinga* dynasty.

Arahanta-pasādinam kulinga . . ya . . . nūnam lonakūḍatam rajinolasā . . hethisuhāsam panotasaya . . kalinga velasā . . agamahi pitakūḍa.

"Excavation of the (śālas) of *Kalinga*, enjoying the favor of the *arhantas* (Buddhist saints)—(the rest is too much mutilated to be read with any degree of confidence.)

There is still one more specimen of the old character in a cave at *Khandgiri* not inserted in the plate: it runs

pāḍu mulikase kutamasa lonam.

"excavated by KUTAMA (GOTAMA?) the *pāḍamaulika* (having the feet (of Buddha) on his head) alias the devout."

The above inscriptions are all cut deeply into the rock, whereas the modern Sanskrit ones which occupy the remainder of the plate are rudely scratched upon the stone, and are yet more difficult to decipher.

They are of two distinct ages:—Nos. 2 to 11 from the style of some of the letters belong to the fifth or sixth century, whereas No. 1 in the *Kutila* character, cannot be dated further back than the tenth century.

Being of brahmanical tendency they naturally give a new account of the origin and objects of the caves; but the indistinctness of the writing

prevents our getting completely at their meaning. The language is of course no longer Pāli but Sanskrit.

No. 1. त्रिशधिकारसौराव्यादाचन्द्राङ्ग
 शुद्धा गर्भश्च देवजमुनेः प्रभोश्च
 रस्य विरजा (चेचे) ॥ इत्या गर्भे समु
 द्भवात्मन तस्य चणभिषक् धनदा
 चोरश्च चान्यथस समस्तसुमुनि ॥

“ Under the fortunate government of an equitable prince this cavern (was excavated)—to endure as long as the sun and moon—for the heaven-born munis —(or holy ascetics), in the *viraja khetra* (or holy precincts) of the lord of gods (Jagannath), as a cave of sacrifice (*ijya garbha*) In the *samvat* year nine—(*muni*).”

It is a curious fact that all the inscriptions in this comparatively modern character found on the eastern side of India bear *samvat* dates, either in an era unknown, or in the mere reign of the existing sovereign ; so that little advantage can be taken of them in fixing the epoch of what they commemorate. The word *muni* here attached to *samvatsare* is used numerically for ‘ nine,’ that being the number of the sages. The name of the king under whose just rule the elephant cave was formed into a sacrifice cave connected with the worship of *Prabhiswara*, or JAGANNATH, does not clearly appear.

The fragments (figs. 2 to 11) carelessly cut on various parts of the caves are for the most part imperfectly legible.—They are in all probability merely the names of visitors as at *Allahabad*, *Gaya*, &c. The word *होत्ते* *hotta*, ‘ a burnt-offering,’ occurs in Nos. 3 and 6. No. 8 contains the name KUVVRA’GNI, and No. 10 the title *Uttamakula vansa*, ‘ descendant of an illustrious family.’—It is unnecessary to dwell upon the reading of the rest, in which many letters and detached syllables might be easily transcribed, because they carry with them no trait of interest further than the fact, that the same transitions of the written character visible elsewhere are equally developed in the remains of these *Kalinga* monuments.

We now arrive at the more elaborate and curious document from the same neighbourhood which was the subject of Mr. STIRLING’s remarks alluded to in a preceding page. I cannot begin better than by inserting in his own words Mr. KITTOE’s

Note on the Khandgiri Inscriptions.

“ At your request I visited the caves of *Khandgiri* in March last, for the purpose of examining the inscription mentioned by Mr. STIRLING

in his statistics of *Orissa*, of which a plate is given in the 15th volume, of the *Researches**.

* As few of my readers have an opportunity of seeing the *Researches*, I extract the following description of these caves and of the main inscription from Mr. STIRLING'S Report on *Orissa*, in the 15th volume — *Ed.*

'About five miles west of *Bhobanesar*, near the village of *Jaymara*, in the *Char Sudhi Khandaiti* of *Khurda*, and still within the limits of the *Khetr*, a group of small hills occur, four in number, from one hundred and fifty to two hundred feet in height, which present many objects of interest and curiosity. These hills called severally the *Udaya Giri*, *Deval Giri*, *Nal Giri*, and *Khand Giri*, (by which latter name the spot is now generally designated,) are composed of a silicious sandstone of various color and texture, and are all curiously perforated with small caves, disposed in two or three irregular stories. Each of the caves is large enough to contain from one to two human beings in a sitting posture. Some of them appear to be natural cavities, slightly improved by the hand of man; others have obviously been excavated altogether artificially; and the whole are grotesquely carved and embellished. In one part, a protecting mass of rock has been cut into the form of a tiger's head, with the jaws widely distended, through which a passage lies into a small hole at the back secured by a wooden door, the residence of a pious ascetic of the Vyshnavite sect. The ridiculous legend which the natives relate to explain the origin of these isolated hills, is, that they formerly constituted a part of the *Himalaya*, at which time they were inhabited by numerous Rishis, who dug the caves now found in them. They were taken up bodily, ascetics and all, by MAHA'MI'R HANUMA'N, with other masses of rock, to build the bridge of *Rama*, but, by some accident, were allowed to drop in their passage through the air, when they alighted in their present position. I am almost tempted to add, as a curious coincidence, that they are the only real sandstone hills found in this part of the country; but the geology of the district has not been sufficiently explored, to warrant my advancing such an assertion positively. The summit of the highest rock, is crowned by a neat stone temple of modern construction, sacred to the worship of *Parasnath*: all around, and in the neighbourhood of which, are strewed a quantity of images of the nirvānas, or naked figures worshipped by the Jain sect, executed chiefly in the grey chlorite slate rock. At the back of these temples, a highly remarkable terrace is shewn, called the *Deo Sabhā*, or assembly of the gods, which is covered with numberless antique-looking stone pillars or temples in miniature, some standing, others lying on the ground, about two or three feet long, having, on each of the four sides, a figure of the naked Jain deity rudely sculptured. The place is still frequented by the Jain of Parwar merchants or *Cuttack*, who assemble here in numbers, once every year, to hold a festival of their religion. A short way up the *Udaya Giri* hill, the nour or palace of the famous rāja LALU INDRA KESARI, is pointed out as the chief curiosity of the place. It consists of a sort of open court formed a perpendicular face of sandstone rock, about forty feet in height, with shoulders of the same projecting on either side. Rows of small chambers have been excavated in each face, arranged in two stories and divided by a projecting terrace. Both the exterior surface and the inner walls of the chambers are decorated with cornices, pilasters, figures, and various devi-

I discovered at once the incorrectness of the facsimile, moreover that it was only of part of a very extensive inscription.

I found a great many smaller inscriptions in the different caves all of which I transcribed. (See the preceding notice.)

Having no means of erecting a scaffolding, added to the limited leave granted me, I was obliged to defer the agreeable task of copying the great inscription till a future opportunity, which unfortunate circumstances prevented till the latter end of November, when having previously sent on people to make preparations I followed by dawn. After a whole day's hard work, I transcribed the most part of the great inscription and re-compared all the minor ones; I worked for upwards of an hour by torch-light and returned to cantonments, having travelled 38 miles out and home again.

ces very rudely sculptured, and the whole exhibits a faint and humble resemblance, in miniature, to the celebrated cavern temples in the south-west of India. The rude and miserable apartments of the *palace*, are now occupied by byragis and mendicants of different sects, who state that the place had its origin in the time of BUDDHA, and that it was last inhabited by the *râni* of the famous *rîja* LALAT INDRA KESARI, a favourer of the Buddhist religion. Many odd fables are related of the scrapes into which she was led by her heretical notions, and of the way in which her conversion to the orthodox system of worship was at last effected.

Farther up the same hill, on the overhanging brow of a large cavern, one meets with an ancient inscription cut out of the sandstone rock, in the very identical character which occurs on the pillars at Delhi, and which as yet has been only very partially decyphered. Having been enabled to obtain an exact facsimile of this interesting monument by the assistance of Colonel MACKENZIE, whom I conducted to the spot in 1820, I shall annex the same to the Appendix of this paper. There are I think two eminently remarkable circumstances connected with the character used in the above inscription. The first is the close resemblance of some of the letters to those of the Greek alphabet, and the second the occurrence of it on sundry ancient monuments situated in widely distant quarters of India. In support of the first assertion, I need only point the attention of the reader to those of the characters which are exactly similar to the Greek *on*, *sigma*, *lambda*, *chi*, *delta*, *epsilon*, and a something closely resembling the figure of the *digamma*. With regard to the second, any reader who will take the trouble of comparing the *Khand Giri* inscription with that on FERROZ SHAH's *lât* at *Delhi*, on the column at *Allahabad*, on the *lât* at *Bhim Sen*, in *Sarun*, a part of the elephants and a part of the *Ellora* inscriptions, will find that the characters are identically the same. A portion of the *Ellora* and *Salsette* inscription written in the above character, has been decyphered by the learning and ingenuity of Major WELFORD, aided by the discovery of a key to the unravelling of ancient inscriptions in the possession of a learned brahmin, vide the eleventh article of Vol. V. Asiatic Researches; and it is to be regretted that the same has not been further applied to decyphering the *Delhi* and other

I prepared a copy of my work (on a large scale) in pale ink, and again returned to *Khandgiri* on the 18th of December; I compared this copy with the original, correcting all errors with ink of a darker shade, and completed such parts as had remained unfinished on the former trip. This I accomplished in eight hours and returned the same day via *Bobaneswar* to *Cuttack*.

I had again occasion to observe the great advantage of performing such work towards sunrise, and more particularly about sunset. The degree of light at that time being most favorable, faint letters which in the glare of noonday are not perceptible become clearly so then: I would observe however that I always mark such letters with dotted lines, as are doubtful.

The nature of the stone at *Khandgiri*, *Dhaulti**, and of the *Bobaneswar* temples is such as to render it quite impossible to take off facsimiles, as will be seen by the specimens of the different rocks†.

characters. The solution attempted by the Père TRIEFFENTHALER, does not seem to me to meet any attention‡. The natives of the district can give no explanation whatever on the subject. The brahmins refer the inscription with shuddering and disgust, to the *Budh ka Avel*, or time when the Buddhist doctrines prevailed, and are reluctant even to speak on the subject. I have in vain also applied to the Jains of the district for an explanation. I cannot however divest myself of the notion that the character has some connection with the ancient *Prākṛit*, and considering that it occurs in a spot for many ages consecrated to the worship of *Parasmath*, which the brahmins are pleased to confound with the Buddhist religion, and that the figure and characteristic mark which appears in company with it, thus † does in some sort seem to identify it with the former worship; I am persuaded that a full explanation is to be looked for only from some of the learned of the Jain sect."

* We have not yet been able to insert the facsimiles of the *Dhaulti*.

† The rock is a coarse sandstone grit, or shingle conglomerate.—ED.

‡ He says, speaking of FERROZ SHAH's pillar: Après avoir beaucoup et long temps cherché j'ai trouvé la signification de ces caracteres. Ce sont en partie des signes numeriques, en partie des figures d'instrumens de guerre dont les Indiens se servaient autrefois. Δ est le caractère du nombre huit: 8 celui du nombre quatre, O designe le sceptre de Rama jointa Δ un globe; N désigne la figure d'une charrue que était autrefois un instrument de guerre chez les Indiens. X a de la ressemblance avec la lettre qui signifie C ou K: il est plus probable cependant que cette figure de dix Roman ou Ch Grec désigne une fleur à quatre feuilles dont les gentils employent quelque fois la figure pour servir à l'interponctuation des mots; Δ triangle qui est la déesse, Bavani; € est la caractere du nombre 6. E enfin désigne une espee de pallebarde avec laquelle Ram couchee sur le carreau un geant à mille bras. Des que ces caractères ont de la ressemblance avec les caractères Grecs, quelques Européens ont cru que cet obelisque avait été élevé par Alexander le grand: mais c'est une erreur, &c.

The hillocks of *Khandgiri* and *Udayagiri* form part of a belt of sandstone rock, which, skirting the base of the granite hills of *Oriassa*, extends from *Autgur* and *Dekkunál* (in a southerly direction) past *Kírdá* and towards the *Chilka* lake, occasionally protruding through the beds of laterite.

Khandgiri is four miles northwest of *Bobaneswar*, and nineteen southwest of *Cuttack*.

The two rocks are separated by a narrow glen about 100 yards in width.

Khandgiri has but few caves on the summit. There is a Jain temple of modern construction, it having been built during the Maharatta rule. There are traces of former buildings ; I am inclined therefore to think that the present temple occupies the site of a *Chaitya*.

There is a tank hewn out of the rock on the eastern face of the hill which is held sacred by the Hindus as well as the Jains. This probably may be the "*Sítala taḍḍiga*" alluded to in the inscription.

Udayagiri is entirely perforated with small caves on its southern brow. The natives have a tradition that there were formerly 752, exclusive of those now called *Lálhat Indra Keshari's* *nour*. A great many still remain perfect ; none are of any size ; they are mostly small chambers about 6 feet by 4, and from 4 to 6 feet high, with verandahs in front and small doorways to them hewn out of the solid rock. Several are cut out of detached blocks in fantastic shapes, such as the snake cave, and tiger cave, &c. There is much rude sculpture in some of the caves representing battles, processions, the worship of the holy tree, &c. : there are many elephants represented in basso relievo also detached of yore.

A great number of caves were destroyed for materials to build the Jain temple, and it appears that the rest have suffered during the wars between the Brahmins and Buddhists in remote ages, since which the spot has been occupied by ascetics of the brahminical faith.

Stone has been quarried here to build the temples of *Bobaneswar* when probably many caves were destroyed, as well as the buildings of which so many vestiges are to be found in the jangal around.

It will ever be a matter of regret that I was unable from want of leisure to make drawings of the sculpture and plans of this extraordinary place.

Before I conclude this note I must remark on the ingenious method which had been adopted to drain the chambers, which from the porous nature of the stone would otherwise have dripped in wet weather : small grooves are cut along the ceilings all verging to one point

at the lower corner, where a perforation is made to duct the water without.

The great inscription is cut over the entrance of the largest cave called *Hathī Gūmpha*, and occupies a space of 75 square feet."

Nothing short of an impression (and from the nature of the rock an impression was impossible) could surpass in fidelity Mr. KITTON'S twice-compared facsimile, which is given on a reduced scale in plate LVIII. The only liberty taken by the transcriber is in arranging the lines parallel and even, whereas on the stone they run very irregularly as represented in STRILING'S lithograph. Want of space also has made me crowd the letters in the lithograph too much, to the abridgment of the spaces which in the original most usefully mark the conclusion of each compound word.

One prominent distinction in the alphabetical character would lead to the supposition of its posteriority to that of the *lāts*, but that the same is observable at *Girnar*: I allude to the adoption of a separate symbol for the letter *r* (|) instead of confounding it with *l* (J). Hence also it should be later than the *Gaya* inscription, which spells *Dasaratha* with an *l*.—(*dasalathena*). There are a few minor changes in the shape of the *v*, *t*, *p* and *g*; and in the mode of applying the vowel marks centrally on the letters, as in the *m* of *namo*; the letter *gh* is also used: but in other respects the alphabet accords entirely with its prototype, and is decidedly anterior to the modifications just observed in the *Saṁhadri* cave inscriptions.

The opening words of the inscription command our curiosity from the introduction of a regular invocation, in lieu of the abrupt style of ASOKA'S edicts. *Namo aruhantānam namo sava sidhānam!* "salutation (or glory) to the *arhantas*, glory to all the saints; (or those who have attained final emancipation!)" These words evidently betoken a more matured and priestly style of composition. It should also be noted that the termination in *āham*, which in Sanskrit only belongs to the genitive plural, in Pāli serves also for the dative—the Sanskrit would be नमः अर्हते नमः सर्वे सिद्धे; the orthography of the text, however, differs materially from that of the modern Pāli.

The next words, *Airena maharājena mahāmeghavarāṇaṇa chetakājate . chhadhanena pasathasukelukhanena chaturantalathaganena*, are almost pure Sanskrit,—हेरेण महाराजेन महामेघवारणेन चैत्यकार्यचतनाचधनेन प्रसवसुकलखणेन चतुरानतरस्यामुमेन,—'by AIRA—the great king,—borne on his mighty cloud-chariot,—rich in possession of the purest wealth of heart and desire,—of exceeding personal beauty,—having an army of undaunted courage.'

The concluding words of the first line are clear in import though slightly erased . . *kalingādhipa tirāsi sikhirā avalonam*, . . "by him (was made) the excavation of the eighty-three rocky peaks of *Kalinga dwipa*." If objection be taken against reading *dhipa* as *dwipa*, by altering the *rā* to *nā*, we shall have the preferable reading—*Kalingā-dhipatinā-asi sikhārāvalonam*,—"by him the king of *Kalinga*, &c. was this rock excavation (made)";—*avalonam* is formed from the word *वन* before explained.

The second and third lines, owing to the same projecting ledge of stone which has so fortunately sheltered the upper line from the destructive influence of the ruin through so many ages, are equally well preserved. In Roman characters they may be thus transcribed:—*Pandarusā vasāni siri-kaṭara-sariravatā, kīdita-kumara-kīdika, tato lekha-rūpa-gaṇa-nāva-vapāra-vidhī-visdradana sava-vijūvadātenu navavasani, hotu raja pansūsivasi, pūna chavavisati vase dānava-dhamena sēsāyovenā-bhīvijayo tatiye Kalinga-rāja-vansa-puri sanyuge, mahārājābhisechanam pāpunāti*. For the sake of further perspicuity the same passage here follows in pure Sanskrit, which requires very slight alteration :

पञ्चदश वर्षाणि श्रीकण्ठार शरीरवता कीडिता कुमार कीडिका ततो लेख रूप
गण नाव व्यापार विधि विशारदेन सर्वविद्यावदातेन नववर्षाणि भूत राज पञ्चा-
शीतिवर्षे पुनश्चतुर्विंशति वर्षे दानवधर्मेण शेषयोवनेनाभि विजयः प्रतीयः कलिङ्ग
राजवंशपरि संयुगे महाराजाभिषेचनं प्रपूणाति ।

"(By him) possessed of a comely form* at the age of fifteen years,—then joining in youthful sports,—afterwards for nine years engaged in mastering the arts of reading and writing, arithmetic, navigation, commerce, and law ;—and resplendent in all knowledge ;—(the former *rāja* being then in his eighty-fifth year) thus at the age of twenty-four, full of wisdom and uprightness and on the verge of manhood (lit. the remainder of youth) (through him) does a third victory, in the battle of the city of the *Kalinga* royal family, sanctify the accession (anointment) of the *mahārāja*." In this the only doubtful points to my mind are whether *Vijaya* should be understood as 'victory' or as a proper name, *VIJAYA* the third, (*yo* is written *pc* in the text :)—and whether *sēsha yovena* (S. *yauvanena*) should not be *asesha yodhena*, 'having a numerous army.' The immediate consequence of his accession is related in the next passage .

Abhisitamato vapadhāmmuvase vatavihatato pura-pālāra nivesam paṭi-sankhārayati.

* *Kaṭara sarīra* signifies 'tawny body':—*Srī kaṭara* again may denote 'the servant of *Srī*,' the goddess of beauty.

" Upon his accession choosing the brahmanical faith (विप्रश्नमेवमः ?) he causes to be repaired (संस्कारयति) the city, walls, and houses (that had been) destroyed by a storm (वातविहततः)" and further, proceeding sentence by sentence, in the same strain :

Kalinga nagari khidhira sitala tadāga pariyo cha bathupayani sava yāni-pati santhapa(nam)cha kārayati.

" For the poor (or ascetics) of Kalinga (खिदिर) a reservoir of cool water and a ghāt (?) also presents of every necessary (वस्तुपयनि) and equipages he makes permanent endowment of," (संस्थापनं कारयति).

The next sentence is equally capable of explanation with a very few alterations—*punatisirāsīhi sataśahasehi pakātiyo ranjayati* :—' with eighty-three hundred thousand *panas* he gains the affection of his people' (प्रकृतीः रंजयति.) Then follows,—*datiya cha vāse, ūchitayitā sotekāri pakhima disām, hāya guja nara radha bahula darīn pathūpayati* : ' and in a second house (which) the architect has prepared (आचितयितास्त्वकारी) on the western side, (for) horses, elephants, men, carriages, a number of chambers he caused to be established' (or he transferred them thither) प्रस्थापयति.—*bakula darīn* is altered to *thakula dandī* in the corrected copy :—the sense is therefore doubtful.

Kansabanāgatāya-dasanāya vātānam saka-nagara-vāsino punavase gandhava-veda-budho dūmpana-tabhata-vādītā sandasanāhi usava samaja-kūrdpandhi cha kidupayati nāgari.

' For those coming from *Kansa forest* to see ; the balcony (*vātāyanam*, or *vā tānam* and of them) . . of the inhabitants of *Sākanagara* ; he, inclining to virtue, पुण्यवशः skilled in the science of music, causing to be sounded the *dampāna* and the *tabhata* (drums ?) with beautiful and merry dancing girls (*nāgari*) causes diversions,' (संदर्शनेनैव उत्सव समज कारिनीभिश्च क्रीडापयति नागरीः)

Tathā vtvuthevase vijādhārādhivāse a(rā)hata pubakalinga puvarājāniva sati.

' In like manner turning his mind to law (अवस्थावशः) in an establishment of learned men, he (called together ?) the Buddhist priests of eastern *Kalinga* who were settled there under the ancient kings . . . '

The sense is here interrupted by abrasion of the stone but the words *vata dhama* (व्रतधर्मे acts of devotion) bear out the conclusion that at this age the young prince began to study religion and the laws : the rest of the line is unintelligible.

—(*a*) *bhigārehi taratana sapatena savarathika bhojakapā devam dāpayati.*

This passage has much perplexed the pandit—the word *ratna*, jewel, *savarathika*, all equipages,—and *devam dāpayati*, he gives to god, the concluding verb, are plain, but the meaning is still obscure.

Pachachadānivase Nandarāja tivasata ughaṭitam tannisaraliya vāja panāḍi nagara pasesa "afterwards (पश्चात् दानिवरः) inclining to charity—the hundred houses (?) of NANDA rāja (निवास गृहं उघातितं) destroyed, and himself expelled (तन्निःसार्यः), all that was in the city of *Vajapanāḍi* (?)". . . . here we may fill up—' he converted the plunder to the charitable purposes alluded to ;' and this sense is borne out by the beginning of the following or seventh line.

Anugaha anakani sata sahasani visajati ;—' he munificently distributes in charity many hundred thousands (*panas*)—*pora janapadam satamanchatisam pasāsato vajarugharavedham satam gharini savata kaha dāpanna narapa*.

Here the sense is too much interrupted to be well made out, and the want of the concluding verb leaves us to guess the object of the repetition of *satam*, a hundred, with *paurajanapadam*, the town territory and *ghara* " house." At the conclusion of this line we find a few known words : . . . *thamevase manam*. . . *ta*. . . *ge*. . . *giri* " hill."—

The eighth line is again but partially intelligible :—*ghātāpayitā rājā gabham upapīḍapayati* : *dhātinaṃ cha kammupādāna paṇādena pambātasena vāhayati* : *pammuchitamadhuram apanata* *mora dudāti*.

" (To) the prince who caused (its) destruction, he ordains the pain of the cavern (imprisons in one of the caves ?)—and causes the murderer to labour (*dhātinaṃ* for *ghātinaṃ*) by a generous requital. (*Pambātasena* the pandit would read *parbatūsanam* ' seated on the hill') and lavishes bland speeches and obeisance . . . "

The ninth line opens with a catalogue of further gifts :—*kapam ukha haya gaja (lulapa ?) sahāya sesa cha gharavāsāya, anutika-gana nirāsa-sahanancha karāyitun, ba imandnam jatapa (jātiya ?) paradudāti* :

" Apes, (कपि) bulls, (उखा) horses, elephants, buffaloes (?) and all requisites for the furniture of the house ;—to induce the practice of rejecting (निरास) improper persons, he farther bestowed (or appointed) attendants of the *baiman* caste (brahman ?) ब्राह्मणानां आतीत परिह्रान्ति—the rest of the line is irrecoverable. Henceforward the commencement also is lost, so that it is only in our power to string together such detached sentences as can be gleaned from what remains. Line 9. *mānatirāja pandarāsa mahāvijaya pāsādam krayati* ;— " . . . rāja causes to be made the *palace* (or fort) of fifteen victories."

Line 10. *puva rūja nivesātam pithu-dāga-dambha-nagare nakāsayatta janapade, bhāvanā chā teresa vase satake* :—' finding no glory in the country which had been the seat of the ancient princes,—a city abounding in envy and hypocrisy,—and reflecting in the year thirteen hundred'—a break follows and leaves us in the dark as to what era (if any) is here alluded to. The Sanskrit of this passage would be :

अपूर्व राज निवेसनं (?) प्रद्युम्नदहनगरे महाशयिता जनपद, भावनसचो
दहनर्षे जनके after this occurs the expression *amarudehasa pāta*
“falling of heavenly form”—used to denote the death of a person,—
then *bārasa* ‘twelve’ and at the end of the line, *siri pithirājano*, which
in Sanskrit will be श्रीशिवराजानः (राजा)

.. *ta jālorulakhila bāranasi hirananivenayati*—apparently ‘he distributes
much gold at Benares (*S. varanasam hiranyāni visirjati*)’—all that follows
is too uncertain until we approach the verb,—*anekāni dato* (*deva*?) *mani*
ratanāni uharāpayati, ‘he gives as charity innumerable and most precious
jewels.’

14th line. . . . *si novasikariti terasamava* (*sata*?) *vasesu panchata* (*paba-*
ta?) *vijaya chana kumarī pasange, arahate panavasata pi kamani sīdināya*
yūpuravake ‘in the year thirteen hundred married (*S. प्रसंगः*) with
the daughter of the so-called conqueror of the mountains (a hill *rāja*)’
—.. the rest is obscure but seemingly declaratory of some presents
to priests.—

15. This line presents but a few words of intelligible import—*vihi-*
tinancha satu disānam *sidiya samipe subhare*—*aneke ya janā*,
and the final word *dhanāni*.

16. *Paṭilake chatara cheteghariya gabha thambhe pati* (*thi*) *payati*,—
‘he causes to be constructed subterranean chambers, caves con-
taining a *chetiya* temple and pillars’ *agisati katuriyann napōda-*
chhuti—agama rājā savatha rāja saurase(*na*)*rāja..ma rājā pusata*
saghate. . . ranāni.

The meaning of this judging from the last word and the constant re-
petition of ‘*rāja*,’ is that he had many encounters with various princes,
including perchance the *rāja* of *Saurasena*, or of *Saurashtra*?

The last line begins well: (omitting *u vi se*)—*kusalo sava pāsanda*
pūjan (*iya*) (17 letters) *karakāra* *patihuta lakivāhani bālevāka-*
dhaguta chana parata chako rājāsanka lavinaravato mahāvijaye rājā
khāravela sanda,—“for whom the happy heretics continually pray
. slayer, having a lakh of equipages. the fearless
sovereign of many hills, by the sun (cherished? or some such epithet)
the great conqueror *rāja KHA’RAVELA SANDA* (or the king of the ocean-
shore—reading *khāravelasya*, and supposing the two final strokes not
to be letters).”

All who take an interest in Indian antiquities will at once see the
value of the above record—perhaps the most curious that has yet been
disclosed to us,—and will lament the irretrievable obscurity in which
the dilapidation of ages has involved the greater part of its contents.
Much may be objected to in the hasty analysis which, in the midst of
the interruptions at this busy season, I have hurried prematurely into

publication : but there can be little doubt of the main facts,—that the caves were executed by a Buddhist rāja of *Kalinga* (named *AIRA* ?) who at the age of 24, after having pursued his studies regularly for nine years, wrested the government from some usurper—distributed largesses bountifully—repaired the buildings—dug tanks, &c. The ambiguity in what follows is partly due to the imperfection of the Pāli dialect which expresses the Sanskrit वसः : *vasah*, 'led on by, enthralled,'—by the same letters, ॐ as the word वर्षे *rashē*, 'in the year.'—I have interpreted it in the latter sense wherever I found a numerical accompaniment,—and in the former where by it only I could make sense.—Each change of inclination is consistently followed by a description of corresponding conduct, and we have throughout a most natural picture of a prince's life, wavering between pleasure and learning,—between the brahmanical and Buddhist faith, then doubtless the subject of constant contention. The history embraces his alliance with the daughter of a hill chieftain and perchance even his death, though this is very unlikely. I have no time however to review the contents of the inscription as it deserves, and must content myself with one or two remarks on the identification of the prince.

Tradition, Mr. STIRLING tells us, ascribes the construction of the *nour* or palace on *Udayagiri* to rāja *LALAT INDRA KESARI*, a favourer of the Bauddha religion, who reigned about the year A. D. 617.

The name of *AIRA* has doubtless much affinity to *INDRA*, and the epithet *mahāmeghavāhana* "borne on the clouds," metaphorically applied, might support the hypothesis of their being synonymous ; but we cannot imagine that the writing is of a period so modern as his reign.

There is, higher up in the same list of *Orissā* kings, the name of *INDRA DEVA* about 340 A. D.,—but even he is not sufficiently old : and it is evident we have no real account as yet of the early rājas of *Kalinga*.—The very name is lost sight of in the *vansavalis* and *cherit-ras* of *Or-desu* or *Utkala-desu* consulted by STIRLING,—nor am I aware of any direct treatise on the subject. The country is only known by Sanskrit authors from its frequent mention along with *Anga* and *Vanga**. But we have far more particular and frequent allusions to it as an extensive and powerful kingdom in the Buddhist annals of *Ceylon*.

Kalinga, (or as it is called in M. Csoma's analysis of the Tibetan authorities†, 'the country of the king of *Kalinga*,'—in curious accor-

* In a broken inscription-slab just brought to my notice in the museum, by Mr. KITTON, the *Kesari* rajas are called *Kalingādhipati*.

† Asiatic Researches, XX. page 317, Notice of the death of *BUDDHA*.

dance with the *Kalinga rāja-vansa pura* of our inscription,) was one of the twelve places among which the relics of *Buddha* were distributed at his death. The left canine tooth fell to its share, and Mr. TURNOUR informs us from his *Pāli* records that the capital of the province was named *Dantapura*; evidently in consequence of this circumstance. The frequent contentions that arose in after ages, for the possession of this precious deposit, may have been the cause of the decline and ruin of this ancient kingdom, which although still known to the natives as the appellation of the coast or maritime tract from *Cuttack* to the *Chilka* lake, has not now sufficient importance even to be named in 'HAMILTON'S Hindostān':—and is only preserved in the name of a small village, *Calingapatam*, probably once the capital; for the inscription teaches us that it was occasionally changed at the pleasure of the sovereign.

On the other hand I need but refer to page 860 of the present volume to prove what an important position the *Kalinga* monarchs at one time enjoyed in India. Their capital was probably at this early period the principal emporium of commerce. The inscription tells us that the young prince was instructed in *nāva-vapāra* 'ship-commerce.' During the life of SHAKYA, also, we learn from M. CSOMA, the king of *Kalinga* sent the king of *Kosala* a piece of fine linen cloth as a present*. It is from these invaluable disclosures of the Buddhist records alone that we can gather any light upon the subject of the true *Kalinga* dynasty, to whom the present inscription undoubtedly relates. "The ruling sovereign, says Mr. TURNOUR, who received the relic at BUDDHA'S death was BRAHMADATTO†. He was succeeded by his son KĀSĪ, who was succeeded by his son SUNANDO. These rājas are stated to have been profound Buddhists. From the indiscriminating tone in which the ensuing monarchs are stated to have 'continued to make offerings to the tooth relic of the divine sage,' it is reasonable to infer that subsequently to SUNANDO'S reign, Buddhism ceased to be the faith of the rulers of *Kalinga*. At all events GUHASIWO, who was a contemporary of the Ceylonese monarch MAHASE'NO must have reigned towards the close of the third century of our era, is admitted to have been of the brahminical faith." *

* CSOMA'S analysis of the *Dulva*, Asiatic Researches, XX. 85. "It comes afterwards into the hands of a lewd priestess, who puts it on and appears in public, but from its thin texture appears to be naked." This cloth must therefore have been as fine as the *Dacea* muslins of later days.

† I find the name of *Brahmadatta*, written *Bhamadatusa* on one of the Buddhist coins of the *Ramadatta* series.

Now this picture accords surprisingly with the facts gleaned from the mutilated inscription. In *SUNANDO*, we may be perhaps allowed to recognize the *NANDA* rāja whose name twice occurs rather than one of the nine *NANDAS* of *Magadha*; the hero of the record may have succeeded him, and he, as we have seen, wavered between the rival religions. The name of this young prince from the most obvious interpretation of the opening line would seem to be *AIRA*, the excavator of the caves and repairer of the palace and religious edifices.

But there is another explanation of the first line, which seems more consistent with the epithet *Mahāmeghavāhana* 'the great rider upon the clouds,'—a term hardly applicable to a terrestrial monarch. It will be remarked that the termination *lunam*, 'excavated,' is indefinite as to time; and far different from the conclusion of every subsequent sentence in a causal verb of the present tense, as, *kīrayati*, 'he causes to be done.' This first line then may be independent of the rest, and may be similar to the announcements upon the other caves, also terminating in *lunam*; or in other words, it may declare the name of the cave as, 'the cave of *Aira*.' Now *STIRLING* tells us that *INDRA*'s wife was the last to inhabit these caves, but that "they date from an age much anterior—the time of *BUDDHA*;"—that is, not of *SĀKYA*, but of *BUDDHA* the progenitor of the lunar race according to Pauranic mythology;—in common parlance from 'time out of mind.'

Again *WILSON*, in his analysis of the *MACKENZIE* manuscripts (vol. 1, p. cv.) remarking that they present no satisfactory materials for tracing the ancient history of the countries north of the *Krishna*, cites among the few traditions recorded, that "the excavations at *Ellora* are ascribed to *ILA* the son of *BUDDHA* the son of the moon." The rājas who ruled subsequently at *Ellora* are said to be *YUVANASWA*, *DANDAKA*, *INDRADYUMNA*, *DARUDHYA*, and *RAMA* rāja.—(Of these *INDRADYUMNA*, it may be remarked, en passant, is the traditionary founder of the temple of *Jagannāth*.)

The *ILA* above mentioned is properly speaking not the son but the wife of *BUDDHA*,—in other words *ILA'* or *IRA'*, the goddess of the earth, or water. From whom was born *AILAS* or *ĀURUVAVAS*, progenitor of the two principal branches of the *CHANDRAVANSA* who reigned at *Kāsi* and *Pratishthāna*.

The essays of *WILFORD* contain frequent mention of *ILA* and *ILA'*, (for this personage is both masculine and feminine,) whom he identifies with *JAPHET* as *Ilapati* or *Jyapati*; and again with *Ilys* of the Orphean theogony, *Gilshāh* of the Persians, and *Ilus* of Homer*. He has, however, omitted what appears to me a much more rational analogy both

* Asiatic Researches, VIII. 255.

philological and mythological; namely, that between the Hindu goddess IRA', and the JUNO of the Greeks "Hpa" or Hera*. The name is not only identical, but to both, though not precisely in the same manner is applied, in western and eastern fable, the decision of the question which could not otherwise be solved of the comparative pleasure to male and female in the conjugal union. Again, the son of ZEUS and HERA is ARES, "Αρης," or MARS; a name for which, KEIGHTLEY asserts, no satisfactory derivation has yet been given. Now this word is almost identical with ऐरस *Airas* or *Ailas*† the direct patronymic of ईरा IRA' or ILA', and the name constantly employed in the *Purānas* to designate PURURAVAS, the celebrated lover of the heavenly nymph URVASI, whose tale is told in the *Vishnu* and *Padma Purānas*, and more pathetically in KALIDA's play of *Vikram-urvasi*, lately translated by Professor WILSON.

PURURAVAS or AILAS was the first monarch of the seven-fold earth‡, and hence might be as well entitled to be called king of *Kalinga* as of every other country. We may therefore understand in the opening passage of the inscription,—‘these mountain caverns were excavated by AILAS, the great king, the cloud-supported, the lord of *Kalinga*,’—no more than an allusion to the same tradition of the origin of these caves as that which prevails at *Ellore*; coupled with the other local tradition, related by STIRLING, that the whole of the rocky hills of *Udaya* and *Khandgiri*, were conveyed thither from the peaks of the *Himālaya*, the headquarters of PURURAVAS' earthly dominion, so well pictured in the poetic fiction of his cloud-borne chariot.

Stripped of its mythological and poetical dress, we may understand by the passage that the caves were natural chasms worn in the mountains by the action of the winds and the waves; for *irū* signifies ‘water, the ocean;’ as *airāvata*, or *airāvana*, ‘the ocean born,’ is the elephant of INDRA the god of the heavens, the atmosphere, whose name is still preserved in the sculptures at *Ellora*§.

* KEIGHTLEY derives *Hpa*, from *hera* the Latin for ‘mistress!’ others deduce it from *æer* the air and *eruo* to love, both equally unsatisfactory.

† The daughters of JUNO are by HOMER entitled the *Eileithyæ*, in which the *r* is changed to *l*?

‡ “The holy BUDDHA begot by ILA'R son (PURURAVAS) who performed by his own might a hundred *asvamedhas*. He worshipped Vishnu on the peaks of *Himālaya* and thence became the monarch of the seven-fold earth.” Extract of the *Matsya purāna*, WILSON'S *Hindu drama*, Vol. I. page 191,—English Edition.

§ In looking at MALET'S account in the sixth volume of the *Researches*, I perceive one of the *Ellora* caves is called *Doomar Leyna*. In this name we may satisfactorily recognize the *lena* or *lona* of the *Khandgiri* inscriptions—the word should, I presume, be read *Dharma lunam धर्मलूनम्* the excavation of *Dharma*, having a gigantic

Should this interpretation of the first line be admitted, though we shall be disappointed in finding the true mundane origin of these singular monuments, we shall nevertheless have abundant reason to admire the antiquity of the Indian mythos, when we thus find in a monument undoubtedly prior by some centuries to the Christian era, the selfsame story which is now repeated by the faqirs who shew visitors over the similar stupendous relics of ancient grandeur on the west of India. In this point of view alone the restoration of the *Khandgiri* inscription, thanks to Mr. KITTOE, must be set down as a grand point gained to confute the arguments of the modernists, as they may be called, who would bring every thing Indian within the space of ten or twelve centuries.—Thus we find Sir C. MALLET wavering between the following accounts of *Ellora* derived from opposite sources :—

“The Mahomedan says, ‘the town of *Ellora* was built by rája EEL, who also excavated the temples, and being pleased with them, formed the fortress of *Deogiri* (*Danlatdbád*) which is a curious compound of excavation, scarping and building, by which the mountain was converted into a fort resembling as some say the insulated temple in the area of the Indur Subha. EEL rája was contemporary with SHA’H MOMIN ARIF who lived 900 years ago.’

“The Brahman on the other hand says—‘that the excavations of *Ellora* are 7894 years old, formed by EELOO rája, the son of PESHPOOT of *Ellichpore* when 3000 years of the DWA’PAR YUG were accomplished. EELOO rája’s body was afflicted with maggots, and in quest of cure he came to the purifying water named SEWA LYE or as it is commonly called SEWALLA, that had been curtailed by VISHNU to the size of a cōw’s hoof. He built a *Kund* for it and bathing therein was purified*.’”

In these conflicting stories we can trace the selfsame tradition of ILA extracted by WILSON from the MACKENZIE records.

It would be well worth while to re-examine the particular manuscript (the number of which is not, however, mentioned), to ascertain what further is said of him, and whether it be possible to consider him in the light of a real monarch of *Deogiri*, whose son could by possibility have imitated his father’s propensity for forming impregnable mountain fortresses in the rocks of *Kalinga* : or whether the name is not rather *Aila* than *Ila*, which will make the same personage at both places, mythological or real, the originator of the excavations. Should an actual monarch, named after this demigod, have ruled in central India in the fourth century before Christ, his synonyme *Pururavas* would bring him satisfactorily into the conditions required for the Grecian *Porus* !

Image of that god in it. Other caves are called *wassa* ‘chamber;’ as *Jun wassa*, *Cumára warra* (*wassa* ?), &c. this is the *vassá* of the inscription.

* Asiatic Researches, VI. 385.

From the second line onwards the inscription of course speaks real events, and is well deserving of a minute and critical examination; but neither time nor space will permit me to say more at present on this prolific subject, and I ought indeed in concluding this hurried and imperfect notice, to apologize for offering it to the Society in so immature a shape.

For the sake of reference I here insert the whole inscription in a connected shape.

1. *Namo arahantantānaṃ na(mo)sara sidhānaṃ Airena mahārājena mahāmeghavāhanena chetakṛjita (nutan) khandhanena pasatha suk(e)lukkanena chaturapāla thānaga (nena) khu te va kalangādhapatirāsisiikkhiraḥvalonam.*

2. *Puṇḍarūsa vāsāni sirikuḍḍaru suriravatā kidiṭṭa kumārā kṭṭikā tato lekharūpāgana nāva vāpā(ra)vidhi visāradena, sava vijāvadātenu navavāsini horarajapanasivusa puna chavavisati vase dāna vudhamena sesa yochendbhivijayo tatiye*

3. *Kalinga rāja vaṇsa puri sayuge mahārājā bhisechanāṃ papunāti, abhūsitamute va pa dhamma vāse vātavhatato purapākāra nivesanaṃ paṭisambhūti ayati, kalingauagarī kkhūhira situla tadāga pāḍiyocha bathapayani sareyānapati son thapayara*

4. *Kārayati; panāthi(ru)si satasahasehi pakataya ranayati, dutiye cha vāse achitu yitṭa sotekārī payimadisam hayegajanararadha bahula dāṇa dipathā payati; kāmā band gataya dāsāṇḍya vātānaṃ sika nogaravāsina punavase*

5. *Gaṇḍhāvaredabudho dapuna tubhatā vādita sandusanūhāṇa usava semupākṭṭa panāpicha kṭṭapayati nōgari; tūtho rivuthe vāse vijādhurādhivāsā ahata pava kṭṭaga pura rājāna e suta.....vata dhamaṭṭa sarā.....rite ranikkhitechhata.*

6. *Bhigārehita ratana sapataya sava rathika bhogakepādevam dāpāyanti, pachala chaddhivase nandurāja tivasata ughāṭitaṃ tanasuraliyaraja paṇḍḍinagarapasesa rise*

7. *Anugaha anekāni satasahasāni visajati porādhānapadam satamāpchaṭisam pasāsuta vujaragharavedham satumgharinisa totaka hudapana narupa*
thumecha vase manam na . n tan . gē .. regiri

8. *Ghātā payitṭa rājā gambha upapṭṭapayati dhutinaṃ chakam mupudana paṇḍdenā pabatusena vādhūti pamuchitumadhuram aparato navera .. (20) morāḍḍati (5)—(15).*

9. *Kapa ukka,haya gaja raluve sādya sesucha gharā vasupa manati kutano virasa hannāpcha kārayitṭa ba imāna nāyotapa paradāḍḍati; ran (9) hā (31).*

10. *Ra . i nanuti rayā raini rosa mahāvijaya pāsāda deruyati thatasaya sate sarelahi dūṣme chasa .. dāta rava gatasaṃ (10) pabayava (17) tiruparunatana ramore tāndhā upahi.*

11.pacha pava āntresātam pithuḍḍaga bhānagalena kāsayaṭa janam Padebhāvanacha teresavasesutoka .. da(ta)temarāLehasapāta barasama va (13)

12. *Machalava cha vipula leyam janetoh i thasam gāga sapānayati .. dha cha rājāna i bhaga sāsita pāḍeva dūpoyatu nāḍa rājā ni ta va a gujnasana (16) makhana pāṇḍa pakhusi ḍ e māga dha cha ja va na ghari.*

13. *.. tajalarala khila barānisi hiranuvāneyati sata vāsā sanāpa rihāre naṃ a kāmāsari yuchuluthi .. navuna puripara ararunāsa yuhava pāḍārājāno .pāḍārājasa dāvi aneku nadato manoruta rana ahārā payati idhasatasa.*

14. *Si nevasi kaḍati terasa mara vāse supatatu vijaya chako kumari pasante ara-hate panno risata pikam rana siddhāyā pūhābakehira atani chenam devani sasasutani vjana utas yārava ladiranaḍḍa deta .. dakarari khiti.....*

15. *Sakatusame rasavīhitiṇam chasuta diśanunjnata a yesa i .. sampapanu arahasani siddhāsamiye subhāre vāsāra samathaghisipa anakeyā jandhā pihya rasilaha sapopatha dhara si dhasayanāṇi .. nōni.*

16. *Putalake chaṭapu cheveru riya gabhathabhe pati pa . yati panatanusuta raja . riya la machhinen cha choyatha agisuti katuriyam napḍalachhati agama rājā sāva tha rājā saresera ma rājā pasato suṭi te apa dhu ji da laṇoni.*

17. *Vi ronovise kusalo sāva pāsāṇḍa pūjano (8) chha (3) kārūkāra (3).. pati putalakivādhani bālevādhakadhuragata chano ghavata chuko rājāsanka lavinā ravato mahuvijaya rājā khāravela sandara.*

VIII.—Memorandum regarding specimens from Seoni Chupara, Pl. LVI.

By D. W. McLeod, Esq.

The accompanying minerals were collected by me during a tour through the district, wherever I met with projecting rocks or veins ; but not being sufficient geologist accurately to identify them all, I have contented myself with attaching numbers to each, corresponding with those on the accompanying sketch map, so that the site of each may be identified.

The greater portion of the district forms a part of the *Sutpara* range up to its junction with the *Vindhya* at the source of the *Nerbudda*, and its character in this part would appear to be a basis of primitive rock (projecting to the southward where it forms cliffs, in many places of several hundred feet in height), overlaid by basalt, and that again very frequently by laterite. The magnesian limestone appears in some parts at the surface in veins of considerable magnitude; and other rocks in various parts may doubtless be found intersecting the basalt; but the three descriptions of rock above noted undoubtedly form the main features of the entire tract.

The southern purgunnahs of the district lying below the cliffs alluded to above, are formed I believe, entirely of the detritus from the primitive ranges, being a silicious clay increasing in richness in proportion to its remoteness from the cliffs and vicinity to the *Máyá Gangá* river; below the upper soils, clays and limes of different characters occur, and veins of laterite and other rocks occasionally make their appearance at the surface, and in one part an apparently very rich vein of black iron ore (mistaken by the natives for antimony, and called by them *Súrma*), of which a specimen will be found amongst the accompanying.

The principal character of the district above the Gháts is that of table land, intersected by numerous ranges of hills, and abrupt ascents and descents. The abundance of moisture in the more eastern portion is perhaps its most remarkable feature, and this characteristic appears to become more fully developed in proportion as the elevation increases until we reach the highest point of all *Amarkantak*, in the vicinity of which the *Laṭá*, *Mahánadí*, and *Nerbuddá*, flowing north, west, and

south-east all take their rise. While traversing this tract in May of last year, I found wherever there was any declivity so that moisture could lodge, green grass of two or three feet in height; and cattle sent thither from the breeding purgunnahs hundreds of miles distant in the month of March, return in June in the finest condition. The tract in question is at present almost unpeopled; but it appears to possess the finest capabilities were they developed by the application of capital and industry. The silicious clay, and iron clay soils, which constitute the greater part of it are admirably calculated for irrigation, (the former in particular,) yielding both rain and spring crops; and trees thrive in them with a vigour which can scarcely be surpassed. The basaltic soil also yields very fine Rubbee crops for several successive crops: but owing to the avidity with which it absorbs moisture, irrigation has not been applied to it. The appearance of the country is highly interesting; and well worthy, I conceive, of greater attention than capitalists have hitherto paid it.

The purgunnahs below the Ghât, however, are at present by far the most highly cultivated, tanks having been formed in every village for irrigation, and the population being dense and prosperous. This is attributable no doubt originally to the predatory habits of the *Gonds* inhabiting the higher tracts, who in former times effectually prevented the progress of civilization and industry, and latterly other causes may likewise have been in operation, tending to the same result. At present the principal products of those portions inhabited by *Gonds* are tussur, lac, wax, honey, catechu, dammer and other produce of the sâl, teak, and other forests which abound; though in parts here and there the cultivation carried on by them is by no means inconsiderable.

[The minerals are deposited in the museum, numbered to refer to the accompanying plate.—ED.]

IX.—*Proceedings of the Asiatic Society.*

Anniversary Meeting, Wednesday Evening the 3rd January, 1838.

H. T. PRINSEP, Esq. Vice-President, in the chair.

J. H. BATTEN, Esq. C. S. Baboo CONVOY LALL TAGORE and CHARLES ELLIOT BARWELL, Esq. were elected members.

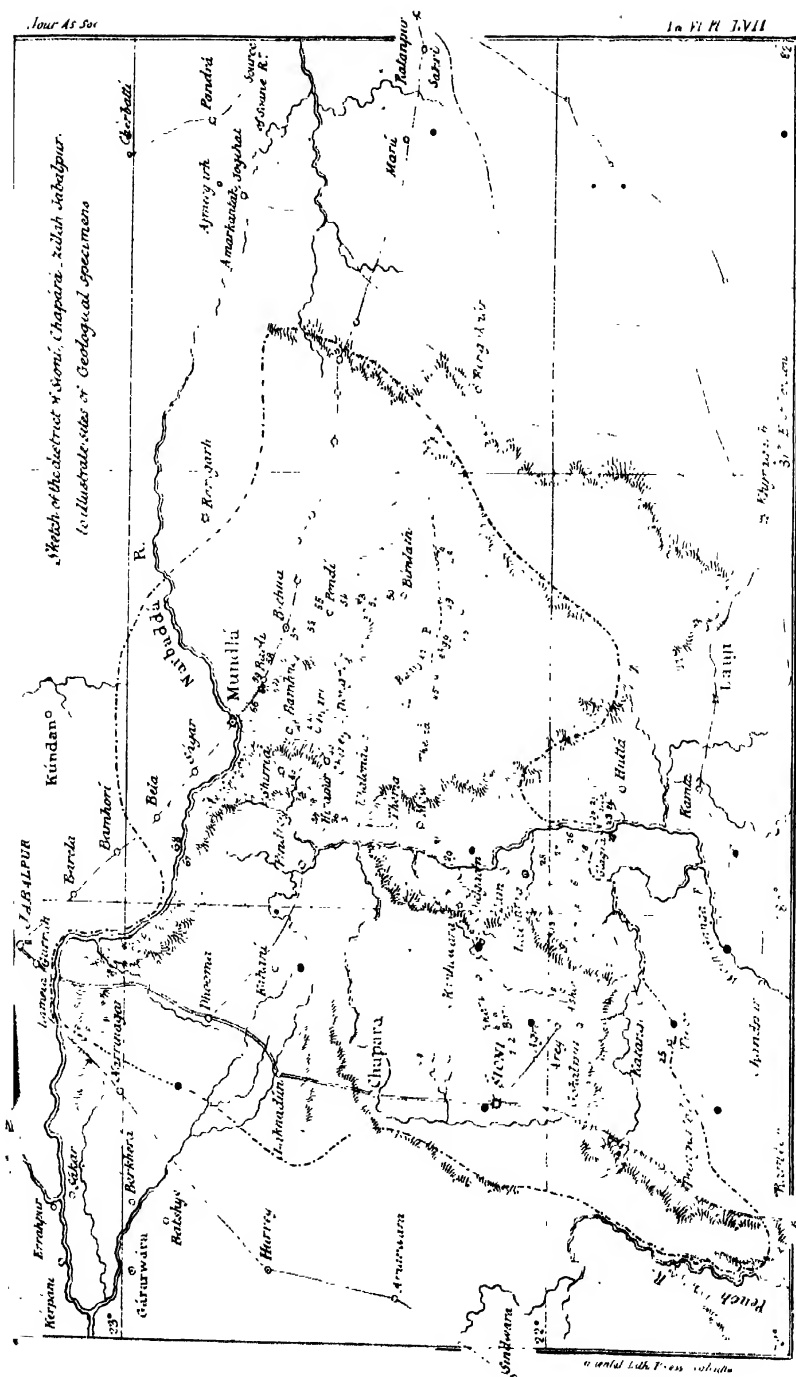
Major W. H. SLEEMAN, was proposed by the Secretary, and seconded by Mr. D. McLEOD.

J. W. GRANT, Esq. proposed by Dr. McCLELLAND, seconded by the Secretary.

Mr. G. A. PRINSEP, proposed by Mr. CRACROFT, seconded by Captain FORBES.

Assistant Surgeon J. ARNOTT, M. D. proposed by J. HILL, Esq. seconded by the Secretary.

Sketch of the district of Soni, Chapara, and Jhalalpur.
to illustrate sites of Geological specimens



Dr. BONSALL, an American physician resident at Manilla, proposed by the Secretary, seconded by Captain FORBES.

SYED KERAMAT ALI, proposed as an associate member by the Secretary, seconded by the chairman.

The Chevalier AMEDEE JAUBERT, President of the Asiatic Society of Paris, proposed as an honorary member by the Secretary:—referred to the Committee of Papers.

The meeting proceeded to select office-bearers for the ensuing year,—first resolving as an arrangement of convenience that the three members of the Museum Committee should be included in the number (nine) constituting the Committee of Papers. The majority of votes returned as *Vice-Presidents for 1838*,—The Lord BISHOP, Sir J. P. GRANT, H. T. PRINSEP, Esq. and Col. D. MACLEOD, Chief Engineer. *Museum Committee* (re-elected) W. CHACROFT, Esq. Dr. McCLELLAND and Dr. G. EVANS, to whom were added to complete the *Committee of Papers*, Captain FORBES, Prof. O'SHAUGHNESSY, Dr. WALLICH, D. HARE, Esq. W. ADAM, Esq. and Dr. D. STEWART.

Correspondence.

Letters from Captain HARKNESS, Secretary, Royal Asiatic Society,—from Professor FRANK of Munich, MM. BURNOUF and JACQUET, were read acknowledging receipt of presentation volumes.

A letter from Messrs. ALLEN and Co. forwarded bills of lading of the bust of Professor WILSON insured at 200 guineas. The bust having safely arrived was placed for the inspection of the meeting at the end of the hall:—

Resolved, that Colonel McLEOD, Captain FORBES and Captain SANDERS, be appointed a special committee to select a place for the erection of the bust and to design an appropriate pedestal.

The bust does great credit to its eminent sculptor CHANTREY. It is a remarkably good likeness of the Professor clothed in all the dignity of classic simplicity and grace: somewhat larger than nature, and intended to be placed above the spectator. On the back is inscribed,—“HORACE HAYMAN WILSON, Secretary of the Asiatic Society, 1811-1832.”

Read the subjoined reply from Captain CAUTLEY to the following letter addressed to himself and Dr. FALCONER in virtue of the resolution of last meeting.

Extract of Secretary's letter to Dr. Hugh Falconer and Capt. P. T. Cautley.

“It is indeed with no ordinary pride that the Asiatic Society has beheld this first public token of approbation bestowed by one of the leading scientific institutions of England upon two of its members for discoveries—not withheld for prior communication where their merit and value were sure to win honors and fame, but at once made known to their associates and published to the scientific world through their transactions.

The honor to yourselves is the more flattering because it is disinterestedly bestowed, and as honorably won by the real merit of your researches in a field of your own discovery, and in a country hitherto supposed barren of fossil remains.

Those who have followed you in other parts of the same field, and in the no less interesting valley of the *Nerbudda* and in the Gulph of *Cambay*, will share the gratification you must feel at this growing attention of scientific men at home to the geology of India; and the Society as a body feels that it cannot but derive benefit as well as lustre from every tribute of approbation won by the individual exertions of its members, whose activity and cooperation constitute at once its reputation and its existence.

I have been instructed by the President and members to thank the Geological Society for their consideration in allowing them thus to see the medals and to be the channel of conveying them onwards to *Seharanpur*.

[Additional to Dr. FALCONER.]

In doing so I shall not fail to make known the zealous continuation of your joint researches, crowned as they were the last year by the discovery of a gigan-

tic fossil ape, the nearest approach to fossil man that has yet rewarded the labour of geologists. I shall also allude to the Scientific Mission upon which you are at present engaged, and lead them to participate in our expectation of splendid and valuable results to science in all the branches which your extended knowledge embraces."

Reply to the Sec. As. Soc. dated Camp Doab Canal, 21st Nov. 1837.

SIR,

I have the pleasure of acknowledging your letter of the 10th instant, with the Wollaston medal awarded by the London Geological Society to my colleague HUGH FALCONER and myself.

Although the honor conferred upon us by the late Council of the Geological Society of London (distinguished as that Council was, and doubly distinguished in the name of its President) has been and is the source of extreme gratification, I would not lose this opportunity of expressing the acknowledgments which I consider due to the Asiatic Society of Calcutta, not only for its having been in my case the animater of my humble career in the paths of science, but also from its having done us the honor of admitting our papers into its Transactions, and thereby of providing the Geological Society with data, by which it has been guided in its present award.

(Signed) P. T. CAUTLEY, Capt. Bengal Artillery.
Library.

The following books were presented :—

Voyage dans l'Inde par VICTOR JACQUEMONT, Parts 1 to 13—*presented by the Government of France*—(forwarded by Messrs. JOUY ET FILS of Paris.)

Translations of the Linnean Society, Vol. XVII. Part IV. and a list of its members—*by the Society.*

The fourth and fifth Reports of the British Association for the advancement of Science—*by the Association.*

Modern India, by Dr. H. H. SPRY—*by the Author.*

Journal of the Royal Asiatic Society, No. 7—*by the Society.*

Earl STANHOPE's address to the Medico-Botanical Society—*by the Society.*

Proceedings of the Royal Society, Nos. 18 to 29—*by the Society.*

Proceedings of the Royal Irish Academy for the year 1836-7—*by the Academy.*

Proceedings of the Committee of Agriculture and Commerce, &c. of the Royal Asiatic Society—*by the Society.*

A letter to the Right Honorable Sir HENRY HARDINGE, K. C. B. M. P. on the effects of solitary confinement on the health of soldiers in warm climates, by JOHN GRANT MALCOLMSON, F. R. S. and M. G. S. Surgeon E. I. C. Service, late Secretary Madras Medical Board—*by the Author.*

Ancient and Modern Alphabets of the Popular Hindu Languages of the Southern peninsula of India, by Captain H. HARKNESS, M. R. A. S.—*by the Author.*

VON HAMMER's history of the Ottoman empire, Vol. 18—*by the Author.*

Jahrbucher der Literatur, Vols. 73, 74, 75, and 77, edited by the Baron HAMMER PURGSTALL—*by the Author.*

Four Gospels and Acts of the Apostles, Anglo-Industani—romanized, by Mr. C. E. TREVELYAN.

Meteorological Register for November 1837—*by the Surveyor General.*

From the Booksellers:

Lardner's Cabinet Cyclopaedia—Literary and Scientific men, vol. 2.

The Secretary laid before the Meeting, a copy of the *Khazānat ul Ilm* at length completed, also the first proof of the *Sharaya ul Islam* recently undertaken in conjunction with Newab TAHA'WAR JUNG. Also the catalogue of Sanskrit, Prākṛit, and Hindi works, in the Society's Library; inclusive of those received from the College of Fort William.

Resolved, that copies of this and of the Persian catalogue, should be distributed to the learned Societies and to such oriental scholars as are honorary members, in order that the contents of the Library may be generally known; and that copies may be made under the superintendence of the Society's pandit or maulavi of any manuscripts for parties who may be desirous of obtaining them, at the customary rates per 1,000 slokas for Sanskrit, and per jūz for Persian, subject to audit by the Committee of Papers.

Resolved, on the motion of the Secretary, that two copies of the oriental works lately completed by the Asiatic Society be presented to his Royal Highness, Prince HENRY of Orange, for the Universities of Utrecht and Leyden respectively.

The Secretary then read the Annual Report of the Society's progress for the year 1837.

"The accession of Members to the Society during the year 1837, had been larger than in any preceding year since the foundation of the institution, viz.

Ordinary Members (including Mr. TURNOUR's name transferred), .. 40

Honorary Members, .. 7 viz.

The Right Honorable C. W. W. WYNN, Sir ALEX. JOHNSTON, Sir G. STAUNTON, the Bishop of Isauropolis, M. P. A. LAIR, President Caen Society, the Baron SCHILLING of Cronstadt and Nawab ABDUL JABAR KHAN, Bahadur.

The loss of Members by death and departure to Europe had been as follows :

By departure to Europe, Col. COLVIN, Dr. MILL, Col. HEZETA, Dr. CANTOR, Dr. SWINEY, Dr. LANGSTAFF, Mr. G. A. BUSHBY, Rev. Mr. BATEMAN ; and on the eve of departure Sir C. T. METCALFE, Bart., the Honorable Mr. MACAULAY, Sir C. D'OYLEY, Brit., C. E. TREVELYAN, Esq. the Honorable W. L. MELVILLE, and H. WALTERS, Esq.

By decease in India, the Honorable Sir BENJAMIN MALKIN, V. P. the Rev. Dr. MARSHMAN, and among members retired to Europe the illustrious HENRY COLEBROOKE, Esq., Mons. KLAPROTH, Sir W. WILKINS and Dr. ROBT. TYTLER. To the memory of the first of these distinguished men a tribute had been placed on the Society's proceedings, and the pages of the Asiatic Journals of London had embodied biographical notices in detail of Drs. WILKINS and TYTLER, justly appreciating the services which in their separate lines of study they had rendered to Sanskrit and Arabic literature.

SIR BENJAMIN MALKIN, had been but a short time a resident member, but he had entered most warmly and efficiently into the interests of the Society, choosing for himself as President of the Statistical Committee a most important and hitherto unexplored field of investigation.

Dr. MARSHMAN was the companion and fellow-labourer of the late Dr. CAREY. Like the latter he felt the immense advantage to be obtained in his peculiar mission, by mastering the learned languages of those whose minds and hearts he would address. While his colleague therefore devoted his attention to Sanskrit and Bengalee, he applied himself with equal diligence to the study of the Chinese language, so that he was soon enabled to complete and to publish at Serampore, with type of his own fabrication, a translation of the whole Bible in the Chinese language. The following account of his habits of industry is extracted from a notice in the Friend of India for 14th Dec. 1837.

"His constitution appeared to be constructed of iron. He exposed himself to all the severities of an Indian climate, with perfect impunity. He enjoyed, till within the last year of his life, such uninterrupted health, as falls to the lot of few in India. During thirty-seven years he had not taken medicine to the value of ten rupees. The strength of his body seemed to be admirably adapted, with the structure of his mind, to fit him for the long career of usefulness he was permitted to run. He was peculiarly remarkable for ceaseless industry. He usually rose at four, and despatched half the business of the day before breakfast. When extraordinary exertions appeared necessary, he seemed to have a perfect command over sleep, and has been known for days together, to take less than half his usual quantity of rest. His memory was great beyond that of most men. He recalled facts, with all their minute associations, with the utmost facility. This faculty he enjoyed to the last day of his existence. During the last month of his life, when unable even to turn on his couch without assistance, he dictated to his daughter Mrs. VOIGT, his recollections of the early establishment of the Mission at Serampore, with a clearness and minuteness perfectly astonishing. The vast stores of knowledge which he had laid up in early life, and to which he was making constant addition, rendered his personal intercourse in society a great enjoyment."

The following was the abstract of receipts and expenditure during the past year in the general account, taken from the Treasurer's books.

PAYMENTS.			RECEIPTS.		
	Rs.	As. P.		Rs.	As. P.
To Secretary's office establishment,.....	790	5 9	By balance 31st Dec. 1836,	220	3 8
To House establishment,...	1714		By collections of quarterly contributions and admission fees,	6994	8 3
To Oriental Library ditto,...	1014		By museum grant from Government from Aug. to Nov. at 200,.....		
To Curator's salary up to the 18th August,.....	1290	0 0	By establishment for care of Oriental manuscripts, }	936	0 0
To ditto contingent,.....	614	10	By Interest on Govt. securities,.....	742	3
To Printing 1st pt. 19th vol.	1506	10	By Dividend from Mackintosh and Co.	342	13
To Stitching ditto,.....	75	0	By Sale of Govt. 4 per cent. paper,.....	2109	6 11
To Printing authors' extra copies,.....	139	14	By Sale of part 1, vol. 19,...	8	0 0
To Lithographic plates by Tassin,.....	348		By received in deposit from the French government towards procuring a copy of the Vedas, ...	625	0 0
To Kāsināth for engravings,...	32				
To Members' copies of Journal, 1100, with extras	1293				
To Contingent charges, including ratan matting for ground floor, ...	973	9 1			
To transfer to Oriental publication account for Paris sales credited in London,	469	8 0			
To Balance in the Bank of Bengal,.....	2526	11 9			

Rs. 12818 3 11

Rs. 12818 3 11

To the cash balance were to be added one quarterly contribution, and half a year's interest, together about 2000 rupees: but on the other hand there were bills due for printing and for the journal, and credits to be met for the Spiti expedition and for the Statistical Committee to an equal amount.

Adverting to other accounts kept distinct from the general funds, the Report noticed, first, the subscription raised for the improvement of the museum, amounting to rupees 1429, the whole of which sum had been expended in the construction of various cabinets, and glass cases for birds, animals, insects, shells and fossils, with which the lower rooms were now provided, to the full extent of their accommodation.

Second, the subscription for Dr. MILL's portrait, rupees 1886; of which rupees 1838 4 9 = £180 had been remitted to the London Agents to be held at Dr. MILL's disposal for that object.

In the department of *Oriental Publications* the Secretary's books presented the following statement:—

PAYMENTS.			RECEIPTS.		
	Rs.	As. P.		Rs.	As. P.
To various bills of the Baptist Mission Press, }	2204	9 11	By cash balance of last year,	2174	8 7
To pandit's wages for correction,	24	0	By collected from subs...	982	10
To freight and packing, ..	53	13	By general sales,	516	10
To refund to the Editor, of the Inaya,.....	20	0	By works sold to the Education Committee, ...	334	
To binding, stationery, &c.	37		By sales at Benares,.....	93	
To writers and collectors,...	120		By sales at Paris, through the French Asiatic Society, frances 1173, 80 at 2-5 per rupee,	469	8 0
To balance in hand,	2140	11			
	4600	6 10		4600	6 10
To bills presented not yet paid:			By balance, 1st Jan. 1838,	2142	13 5
Mahābhārat, 3 d vol.	3693	13 0	By outstanding subscriptions, say,.....	1200	0 0
Khazāunt ul ilm,	809	0 0			

All the works which the Society had undertaken to finish were now completed with the exception of the *Mahābhārata* itself advanced to the 300th page of the fourth or last volume. Of the sale of this work it was somewhat premature to form any estimate before the whole series could be offered to purchasers; but judging from the other finished Sanskrit works, the native demand would be very limited; owing to the great poverty of the learned classes, to the absence of a *tika* or commentary which most readers required, and to the adoption of the Devanāgarī character; the proportion of Bengali readers being far above that of up-country pandits. By the time the edition would be completed there would probably be a balance against the undertaking of near 60 0 rupees.

As one mode of diminishing this large debt, the Committee of Papers had recommended the acceptance of an offer of 1000 rupees for the incomplete copies of the *Fatāwa Alemgiri*, of which a maulavi was willing to undertake a reprint, and it was thought still higher terms might be obtained, so numerous were the demands for law books among the educated Muhammedans. Confident hopes were long entertained of a favourable answer to the Society's Memorial to the Honorable Court of Directors in 1835: it was known that the Court had recommended the local Government to subscribe 500 rupees per month expressly to the furtherance of the Society's Oriental publications, but even that degree of patronage had been since understood to be negatived by the Board of Control; leaving the cause in a more hopeless condition than if a decided refusal had at first been given, from the growing liabilities incurred on the expectation of aid.

Meantime the local Government had most liberally seconded the Society's appeal for support to its museum, and had forwarded with its favourable recommendation, a scheme for elevating that museum into a national institution. The greater success was anticipated to this important movement, since Professor WILSON had been placed in charge of the museum and library at home, to which he was well aware how powerful an auxiliary the Indian institution might prove.

At the meeting of October the existing museum was placed under a special Committee, in lieu of appointing a curator. Too short a period had elapsed to render a formal Report necessary from them. Upwards of 200 new specimens of natural history had in that time been added, besides the ordinary setting up of skeletons, &c. Catalogues of several branches of the collections had been prepared by MESSRS. PEARSON, CANTOR, and McCLELLAND.

In the publication of the *Researches* great delay had taken place from the Orphan Press having been engaged on urgent Government business. The second part of the 20th volume however was in a forward state.

A catalogue of all the Oriental MSS. now in the Library had been printed in the native character for circulation—the Sanskrit portion containing, as an appendix, lists of such books as the Sanskrit Colleges of *Benares* and *Calcutta* possessed exclusively.

In conjunction with the Nawāb TAHA'WAR JANG, the printing of the *Sharaya ul Islām*, a text book of Shia law, had been undertaken.

Out of the society had appeared many interesting acquisitions to the science and literature of the country. A dictionary of the *Manipur* dialect, a grammar of the *Sindhi*, grammars of the *Belochi* and *Barmudi*: besides the *Cochin-chinese* and *Burmese* dictionaries, the former now nearly through the press: Mr. TURNOUR's *Pāli Annals of Ceylon*: and a full account of the caves of *Adjanla*. Captain BOILEAU's Survey of *Shekhawati* had given a valuable accession to geography and statistics of India; and many reports of scientific expeditions to *Assam*—to the interior of *Maulmein*, to the valley of *Sinde*, &c. had been made public by Government. At the present moment two fresh expeditions had been set on foot, one to *Bootan* under Captain PEMBERTON, the other under Captain BURNES to *Cashmir*; and, under the auspices of the Patron of the Society, inquiries had been circulated on several points of scientific and commercial interest—the tides—lichens—coal, &c.

The current publication of the Society's proceedings in the journal rendered it unnecessary to dwell upon the general subjects that had engaged attention within its walls during the past year. It might be sufficient as an evidence that members were not relaxing in their labors in any branch of research, to state, that al-

though the Journal had nearly doubled its volume, it had still been unable to keep pace with the influx of scientific and literary contributions."

Mr. A. CSOMA in writing thanked the Society for the honor they had intended him, but declined accepting the librarianship, as interfering with the course of studies he had marked out for the short period of his sojourn in *Calcutta*.

Resolved—nem. con. on the motion of the Secretary, supported by the Lord Bishop, that Mr. KITTOE be placed in temporary charge of the library and museum on the consolidated allowance heretofore granted to the curator and librarian, viz. Rs. 200 per month.

In introducing the above proposition allusion was made to the important services rendered by Mr. KITTOE in bringing to light the numerous inscriptions of *Orissa* or, more properly, ancient *Kalinga*. A more thorough survey of its ruins was one object contemplated in his nomination, as the discoverer might again be deputed thither when business at home did not press, and he might bring away drawings and plans of all the caves and Buddhist sculpture. There were many deserted monuments there well worthy of preservation in the Society's museum.

Antiquities.

A letter from Captain SANDERS, Sec. Mil. Bd. acquainted the Society with the resolution of the Right Honorable the Governor General to devote 2,500 rupees to the re-erection of the *Allahabad* pillar on Captain SMITH's design No. 3, with the restoration of the lion capital as suggested by Lieutenant KITTOE.

Mr. LISTON forwarded from *Gorakhpur*, a sketch and facsimile of a pillar and inscription discovered by him in the eastern division of that district.

The inscription is in the SAMUDRA GUPTA alphabet, and apparently in excellent preservation: an impression has been requested before proceeding to decipher it.

Mr. VIGNE transmitted from *Iskurdo*, Little Tibet, a more accurate copy of the inscription he had noticed a year ago.

This inscription has been read by M. CSOMA and will appear in the next journal.

The Rev. J. WILSON, President, Bombay Asiatic Society, at the request of the Secretary sent round by sea the cloth facsimiles (natural size) of the *Girnar* inscriptions of which copies on paper had been previously communicated.

Although not equal in accuracy to printed impressions, it is hoped that these splendid memorials may now be deciphered. Those of the older character relate to PIYADASI, but they are very different in tenor from the pillar inscriptions.

Mr. KITTOE gave a revised copy of the *Khandgiri* inscription of STIRLING.

A curious war-hat worn by the *Singphos*, also their musical instruments, mat-shoes, Chinese boots, and fan, were presented for the museum, by Colonel H. BURNEY.

Literary.

Read a letter from the Rev. WM. TAYLOR, of *Madras*, on the subject of the MACKENZIE manuscripts, accompanied with an analysis of several of the restored volumes.

These papers are sent under the impression of their being acceptable for publication in the *Researches*, reserving the original texts and translations of such manuscripts as are considered worthy of further notice for a separate volume.

Referred to the Committee of Papers.

Major LAW, Commissioner, Province *Wellesley*, presented an *Essay* on the birth of BUDDHA, according to the Siamese authorities.

Mr. C. F. TREVELYAN, presented in the name of Munshi MOHUN LAL, a notice of the *Daudputras*; also, an account of *Kāḍ Bāgh*, and of *BAHA'-WAL KHA'N*.

Mr. WATHEN communicated from Ensign POSTANS, some extracts from the *Tohfutul Khwām*, relative to the history of *Sinde*.

Physical.

Replies to the circular regarding Indian lichens were received from Dr. BAIKIE, Dr. GRIFFITH, and Lieut. HARRINGTON, the latter with specimens.

Specimens of the genuine *Jatamāsi* (spikenard of the ancients) were presented by Dr. A. CAMPBELL, Acting Resident *Nipal*, with drawing and remarks on the subject of Sir WILLIAM JONES' paper.

Fossil shells (on very large ammonite) and volcanic minerals from the *Charī* hills, *Cutch*, were presented by Ensign POSTANS.

Mr. HOMFRAY, presented the carcass of a white guinea fowl.

Mr. EWING (through the Honorable Col. MORISON) forwarded a variety of shark found at the Sandheads.

Dr. R. TYTLER, presented a fragment of magnetic ironstone with remarks on the nature of the lines of polarization thereon.

Col. BURNEY presented part of the lower jaw of a fossil hippopotamus (the only one yet found) from a new fossil site in *Ava*.

A drawing of this fragment, which exactly accords with the hippopotamus of the *Siwāliks* having six equal incisors, shall be given hereafter. Col. BURNEY writes:—

"I have the pleasure to send for your inspection a fossil, apparently the lower jaw of a hippopotamus, which was given to me by the prince of *Mekkhara*, and said to have been found, not near the Petroleum Wells, but more to the northward, on a new site on the opposite side of the *Krawadi*, to the westward of a range of hills called by the Burmese *Tang-gyi*, and in our maps *Dāng-gyi*, and on a plain near the city of *Yau kyakhat*, the '*Yo* or *Kakiap*' of our maps, and the *Jaghire* of the old *Kyi-Wunggyih*.

Hearing that there were other fossil remains at this spot, and particularly the whole body of the animal from which this lower jaw was taken, I had obtained the permission of the late Government of *Ava* to send down a party of my followers to examine the spot and bring away all the treasures they could find; but the breaking out of the revolution put a stop to my expedition, and although the present king of *Ava* afterwards promised to order some of these fossil remains to be brought up for me, he has been too much engaged, I fear, to recollect his promise. I believe this is the first portion of a hippopotamus found in *Burmah*. The inhabitants of *Yau* and the *Burmese* in general reversed this lower jaw, and insisted upon it that it was the upper jaw of a *bhitu* or monster."

Mr. KITTOE presented geological specimens from *Cuttack*, supposed to indicate coal—among them, a black chalk fit for crayon drawings.

Extract of a letter from Mr. TAYLOR, H. C. astronomer *Madras*, was read, explaining that he had been engaged in observations of the magnetic intensity along the coast of the peninsula east and west of *Cape Comorin*.

The instruments are now with Mr. CALDECOTT who will continue the series from *Treandrum* to *Tellicherry* and *Bombay*. The observations will be published in a pamphlet when completed. Mr. TAYLOR's *Madras Observatory papers* for 1836-37, vol. IV. are now in the press.

The meeting then proceeded to discuss the tender of Mr. EVANS' collection of Natural History, when it was resolved that before coming to any determination the Committee of Papers be requested to examine and value the collection and report on the expediency of recommending its purchase to Government.

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of December, 1837.

Day of the Month.	Observations at 10 A. M.				Observations at 4 P. M.				Register Ther- moneter extremes.		Rain.	Wind.		Weather.	
	Baromet. at 30".	Thermom. in air.	Depress. of wet-bulb.	Dew-point. Do. by Hygro.	Thermom. in air.	Depress. of wet-bulb.	Dew-point. Do. by Hygro.	Thermom. in air.	Calculated Humidity.	Calculated Humidity.		10 A. M.	4 P. M.	Forenoon.	Afternoon.
1	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
2	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
3	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
4	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
5	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
6	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
7	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
8	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
9	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
10	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
11	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
12	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
13	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
14	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
15	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
16	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
17	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
18	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
19	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
20	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
21	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
22	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
23	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
24	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
25	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
26	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
27	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
28	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
29	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
30	29.520	29.010	73.8	6.0	5.0	62.3	59	70	70	70	70	70	70	70	70
Mean.	30.034	30.017	70.6	7.6	7.2	36.5	82	60	63	62	62	62	62	62	62

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